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Original Articles

A PLEA FOR HOSPITAL REORGANIZATION

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NEW YORK

Let us agree that we are all truly desirous of promoting scientific medicine. How is its development to be accomplished? It seems that the following propositions are axiomatic if the science of medicine is to be truly fostered.

1. The scientific physician or surgeon must have a continuous service in one hospital and in one only.

2. Appointment to the position of visiting physician or surgeon to a great hospital should be dependent on a reputation for accomplished work.

3. In the hospital, preferably on the other side of the hall opposite the hospital wards, there should be laboratories for careful scientific investigation and for carrying forward research regarding the causation and cure of disease.

4. There should be some endowment to pay for brains.

All have heard of these propositions, but how much serious concentrated attention has ever been given to them. To what extent has the system been permitted to drift along in the old ways of the fathers? The development of a New York lawyer is not dependent on the development of French, German, or Chinese law, but it is dependent on purely local conditions as they exist in this country. For example, the legal position of the railways in Berlin is quite different from that of the railways in Washington. Typhoid fever in Berlin, however, is the same typhoid as occurs in Washington. Physicians can learn much if they will adopt a world viewpoint. A progressive New Yorker should fight to destroy the local conditions which fetter his progress and suck his life's blood.

The continuous service is absolutely essential to progress. The wards must be the glory and the pride of the master-mind in charge. They must be a part of his reputation, a part of his joy of living. The head nurse should not be the principal person who is in continuous control. All present know this, and yet few will even think about it, much less act on it. It is so much easier to go to sleep and forget all about it. And while New York is dully sleeping, if it were awake it would take cognizance of the great examples of productivity set by the continuous services of the Johns Hopkins and Ann Arbor Hospitals. Other places which have adopted the continuous service are Pennsylvania, Minneapolis, Iowa City, Cleveland, Galveston and St. Louis. In St. Louis a new hospital with $5,000,000 is assured and in addition to this a children's hospital is to be built, with one hundred and fifty beds. A new medical school on the highest lines will be developed there. Also the resignations of the whole faculty are in the hands of the authorities. And this state of affairs has only roused the East by striking terror into the hearts and homes of some of our medical colleges lest they lose their very best men for whom during so many years they have so illy provided. Let us get together then and make a life of scientific progress possible in a New York hospital. Do not think, however, that the mere promotion of a practitioner of medicine to a continuous service is going to transform him into an advanced medical thinker. Success depends on the selection of the proper type of man who has had the proper training.

Regarding appointment to the service of a great city hospital there is room for much improvement. There should be a complete revolution in the present method. The right to inherit a position should be entirely eliminated as a factor. In general, the promotion of an assistant to the place of the master merely means the promotion into a prominent position of a younger man who more than likely owes his appointment not to his vigorous intellectuality, but rather to his submissive attitude during the days of his tutelage. This is a very widespread evil, this right to inherit. The cure for this is a greater migration of men among the medical institutions of this city and country. A man should not be cut off from a distinguished career in New York because his reputation has been founded in Syracuse or in New Haven. It seems that there must be a great strengthening all along the line if the rule were made that no assistant could ever succeed his chief. Then to rise, the assistant must through his capacity excite sufficient admiration to be called to take charge of a smaller institution. If he again succeeds he might then become eligible for a high position as one of the great masters of medicine in New York City. The scheme would do away with much that is scandalous regarding appointments to hospitals and medical schools in this country, and would inspire hospital trustees and givers to medical charity with a new confidence in the disinterestedness of medical men. This scheme is not utopian, or the mere dream of an idle extremist, but it is a part of the competitive system which has caused the rise of modern German medicine. By such a method you can help to vitalize scientific medicine. The man who rises to highest achievement in this country should be offered the highest reward in the shape of appointment to chairs in medical schools and places in hospitals in this great city. Were hospital trustees sure that such a procedure would be faithfully carried out, there would be no friction between them and their medical boards.

With regard to the arrangement of a hospital for scientific research, the laboratory should be across the hall from the wards, or, at any rate, easy of access to the wards. In such laboratories great work is done in

Germany. New hospitals should provide for such laboratories in order to attract the best men of the rising generation, some of whom have been thoroughly trained in the fundamental sciences of medicine, and have sufficient creative ability to have new ideas. With men of this class in charge of hospital wards, the laboratory becomes a hotbed for the development of young men along the highest lines. And the best young men will flock to such a standard wherever raised. There never was a more attractive opportunity than that offered here in New York to do the right thing in the right way. And yet the years roll by and the old traditions stand protective of the old rotten system, blinding the eyes even of the honest and sincere and placing a deadening inertia over medical progress. And, finally, there must be some small endowment to pay for the brains concerned in such an establishment as this. The visiting physician should spend at least half his day in his wards and laboratory or with students of medicine, and failing this, should be retired. All others connected with his wards should spend their entire time in the service of the patients and the laboratories and the more experienced should be paid salaries. Here they can make a reputation for themselves. Here they can acquire fame at a time of life when new ideas come easily and rapidly. Here they can also be taught to curb their fancies properly. General adoption of any such plans as have been outlined must come slowly if at all. They must ultimately be adopted either through intellectual appreciation of their value, or in imitation of a hospital like the new Rockefeller Hospital, which is to be established on these principles.

One should not consider such a scheme as one of fanciful idealism. It is simply the substitution of work for fame in the place of work for gold during the early life of our best young men. The true ideal is yet higher.

> And no one shall work for money
> And no one shall work for fame
> But each for the joy of working.

NITROUS OXID AND OXYGEN IN MAJOR SURGERY

A NEW APPARATUS FOR THEIR ADMINISTRATION *

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To Horace Wells belongs the credit for first using nitrous oxid for anesthetic purposes; yet it is not probable that he realized the importance of his discovery. The enthusiasm over ether and chloroform as general anesthetics put a check for some time on the use of the gas. About 1863 Colton revived interest in the subject and was successful in administering the gas in dental work. The confidence of the public was soon obtained and since that time nitrous oxid anesthesia in dental practice has been firmly established. Although the gas has been used as an anesthetic in minor surgical work, its use in major surgery has until recently been limited.

At the meeting of the American Medical Association in 1907 Dr. A. D. Bevan, Chairman of the Section on Surgery and Anatomy, gave an address on nitrous oxid in major surgery. He told of his experience with the gas in a variety of major surgical operations and made a plea for an extensive trial of this agent. In his address,[1] however, Bevan does not mention the use of oxygen in combination with nitrous oxid as an anesthetic in major surgery. It is to this subject that I desire to call attention, as the combination makes an anesthetic which has certain advantages over ether and chloroform.

The use of oxygen in combination with nitrous oxid was first suggested by Dr. Edmund Andrews of Chicago in 1868. For some unknown reason little attention was paid to the suggestion, although Andrews demonstrated its value. Within the past few years interest in this subject has been aroused and there seems to be no doubt that this anesthetic is destined to become more popular and to be more extensively used.

Various investigators have carried on experiments in order to determine how nitrous oxid acts when it is taken into the blood. Kemp,[2] after numerous experiments, reached the conclusion that nitrous oxid was held in solution by the plasma, that the gas was a specific anesthetic and was not dependent on asphyxia for its results. With a view to determining the blood changes caused by nitrous oxid Hamburger and Ewing,[3] who have made a careful study of the subject, both clinically and experimentally, conclude that the hemoglobin is not permanently reduced, that anemia is not produced, and that hemolysis is not increased. They state "in a comparison of the three anesthetics from the standpoint of blood changes we conclude that nitrous oxid causes no permanent effects of any significance; that ether causes more harmful changes (slight anemia and marked decrease in coagulation time); that chloroform causes the most harmful results (hemolysis and production of distinct anemia)." It seems clear that, so far as any alteration in the blood is concerned, nitrous oxid is preferable to ether or chloroform.

Postoperative complications, such as pneumonia, bronchitis, nephritis and acidosis, sometimes follow the administration of ether and chloroform. As regards these complications, the nitrous oxid and oxygen combination has a distinct advantage. Nausea and vomiting are of less frequent occurrence following the use of this agent. Still another advantage is the greater safety of this anesthetic. While the mortality from ether and chloroform, when administered by a skilled anesthetist, is not high, yet deaths do occur occasionally even when the administration is by an expert. Bevan gives the mortality from the gas as 1 in 50,000. When oxygen is administered with the gas it is much safer and I am able to find only one death reported from this anesthetic. The element of safety should merit consideration.

When the pure gas is administered, anesthesia is rapidly produced and is accompanied by symptoms of asphyxia. The cyanosis which appears is of a very different character from that which sometimes occurs during the administration of ether and chloroform. In the latter case cyanosis is the result of interference with the action of the heart. It is a condition which demands attention and is the cause of alarm on the part of the anesthetist. Cyanosis from nitrous oxid is an entirely different condition and is due to lack of oxygen in the blood. The condition is transient and readily disappears when air or oxygen is admitted. The cyanosis of itself is not a dangerous condition, although it is not a pleasing sight. This appearance of a patient under nitrous oxid is

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* Read at meeting of the Medical Society of Milwaukee County, Jan. 14, 1910.

1. Bevan, Arthur Dean: Nitrous Oxid as an Anesthetic in Major Surgery, THE JOURNAL A. M. A., July 20, 1907, xlix, 197.
2. Kemp: Brit. Med. Jour., 1897, ii, 1480.
3. Hamburger, W. W., and Ewing, F. E.: The Blood Changes Incident to Surgical Anesthesia, with Special Reference to Those Induced by Nitrous Oxid, THE JOURNAL A. M. A., Nov. 7, 1908, li, 1586.

probably one reason why the gas has not become popular with the medical profession. It is different with the dentists and it is not the cause of alarm from their standpoint. In fact, many dentists are accustomed to administer the gas until they obtain a marked degree of cyanosis. The mask is then cast aside, the tooth extracted and after a few inspirations of air the patient has regained his normal appearance. The dentist is accustomed to see this cyanosis; he knows that it is not a serious condition and it does not worry him. With physicians it is different, and it is not an easy matter to overcome the prejudice which exists in their minds on account of this appearance of the patient.

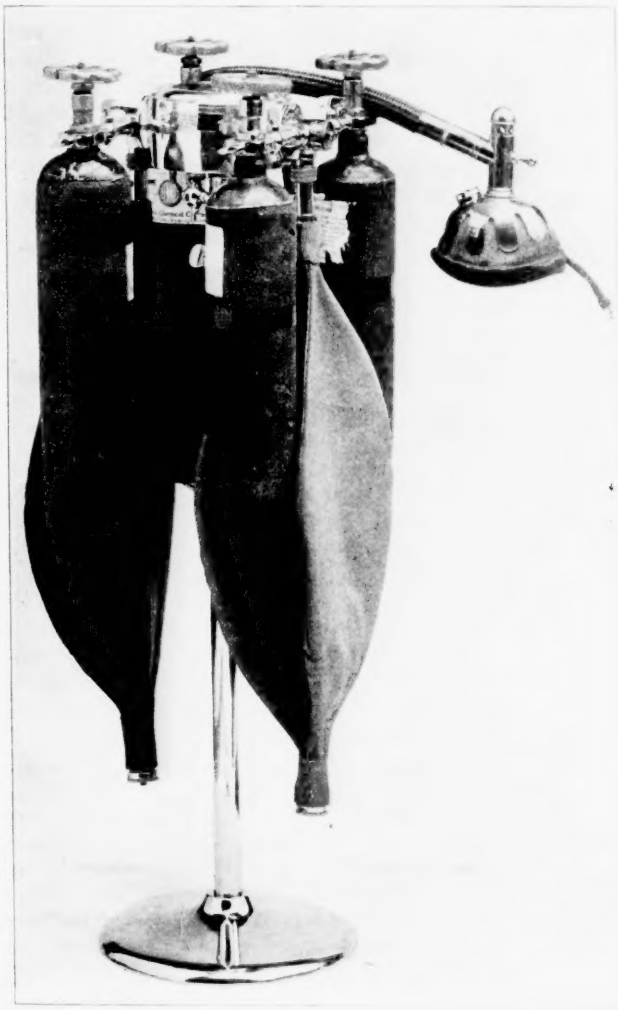
Should convulsive movements occur during the administration, it is a warning to stop the gas and admit air; otherwise dangerous asphyxiation may arise. It is impossible to administer pure gas continuously for any length of time without the admission of air. After a few inspirations of air, the cyanosis lessens, the patient moves and is soon awake unless more gas is given. In prolonged administration of gas and air this process is repeated again and again. In reality it is putting the patient asleep, allowing him to recover partially, then repeating the process. It requires the greatest skill to maintain anesthesia under such conditions, and it is at best not very satisfactory.

By using oxygen instead of air we can maintain better anesthesia and the appearance of the patient is much improved. The degree of cyanosis and the time required to produce anesthesia are in direct proportion to the amount of oxygen used. Hewitt[4] says that gas and air anesthesia is distinctly preferable to that produced by nitrous oxid, although the best form of anesthesia is attainable only when oxygen and not atmospheric air is mixed with nitrous oxid.

It may be asked why it is better to use oxygen instead of air with gas. The explanation is simple. We know that the air which we breathe contains about 20 per cent. oxygen, of which 4 per cent. is taken up by the blood. The amount of nitrogen in the air is about four times the amount of oxygen present. If we administer air with nitrous oxid, in order to obtain the normal amount of oxygen from the air, it is evident that the gas will be much diluted, being only about 80 per cent. It is not possible to obtain good anesthesia with 80 per cent. nitrous oxid. In order to produce anesthesia we must exclude the greater portion of the air. As a result cyanosis promptly appears. By using oxygen instead of air the situation is entirely changed. Thus if we use 4 per cent. oxygen we are able to administer 96 per cent. nitrous oxid, and with such a mixture good anesthesia can be maintained and the cyanosis is to a large extent eliminated. This fact is easily demonstrated. In actual administration 4 per cent. oxygen is not sufficient to overcome the cyanosis entirely and it is advisable to increase the amount of oxygen according to the condition of the patient. Hewitt says that the best anesthesia is obtained with 6 per cent. or 7 per cent. and that it requires 11 per cent. oxygen to eliminate cyanosis entirely.

At the present time nitrous oxid and oxygen is the best anesthetic for short operations, as the reduction of a fracture or dislocation, the opening of abscesses, etc. I have administered this anesthetic for such conditions, but it is to its use in major surgery that I wish to call attention. During the past two years I have administered the gas in a number of major surgical operations. My first experience was with a fixed mixture containing 2 per cent. oxygen. This was satisfactory in some cases; in others it was not, because the amount of oxygen could not be varied. At other times mixtures containing 3 per cent. and 5 per cent. were used, but the results were the same. It was apparent that, if the amount of oxygen could be regulated according to the condition of the patient, much better anesthesia could be secured. With this object in view I have devised an apparatus which I wish to explain. By means of this apparatus nitrous oxid may be given pure or oxygen may be administered with it in any proportion from 1 per cent. to 15 per cent.

The apparatus consists of a mixing-chamber which is supported on a stand composed of four parts. The



Nitrous-oxid-oxygen apparatus.

mixer is made of aluminum and to it are attached the brass supports for the tanks. It contains a chamber which is filled with hot water in order that the gas may be warmed before it is inhaled. Provision is made for two cylinders, each of nitrous oxid and oxygen, also two bags which serve as reservoirs for the gases. By means of an easily regulated valve the amount of oxygen can be easily varied from 1 per cent. to 15 per cent. or more if desired. A rubber hose leads from the mixer to the inhaler. The entire apparatus weighs nineteen pounds and can be carried in a small suit-case or in the special case which has been made for it. It has several advantages over other appliances of a similar character. It is lighter and is more portable—two important features.

4. Hewitt: Anesthetics, p. 297.

It is easily operated and there is nothing to get out of order.

In what class of cases is nitrous oxid and oxygen indicated? Crile[5] has called attention to the use of this anesthetic in certain so-called handicapped patients. He says:

> The natural immunity of the patient is little if at all impaired by nitrous-oxid-oxygen anesthesia, as contrasted with a distinct impairment under ether anesthesia. Likewise there is less surgical shock under nitrous-oxid-oxygen than under ether anesthesia. In patients handicapped by infection or by a previous impairment of the central nervous system, nitrous oxid permits a safer operation than does ether.

His position is well taken, as it is especially in this class of cases that the gas is indicated. In the aged, in persons suffering from acute infections, in cases of nephritis or diabetes, and in patients who have suffered from nausea and vomiting this is the anesthetic of choice. Teter[6] of Cleveland, who has probably had the largest experience in prolonged administration of the gas, has reported over 13,000 administrations, of which over 1,000 have been for major operations. In the larger cities of the country this anesthetic is rapidly coming into more general use. Its greater safety has been proved, and this is a fact that should not be ignored.

Although this anesthetic has certain advantages over ether and chloroform, yet there are some contraindications to its use. In prolonged operations it should not be used in persons who drink or smoke to excess. In emphysema, asthma, in marked arteriosclerosis and in cases in which there is any obstruction to respiration it is not indicated. In prolonged operations on children under 8 years of age the gas is not desirable.

My own experience with the gas has been in a variety of cases, among which are the following: prostatectomy, both perineal and suprapubic, nephrectomy, appendectomy, abdominal and vaginal hysterectomy, colostomy, lithotomy, salpingectomy, dilatation and emptying the uterus, amputation of the leg, herniotomy, etc. The youngest person to whom I have administered it was 3 years, the oldest 86. The longest administration was one hour and fifty-four minutes. The following cases will serve as illustrations:

CASE 1.—F. B., aged 64. The operation was a suprapubic prostatectomy by Dr. Gustave Kolischer. The anesthesia lasted thirty minutes. The patient awoke before leaving the operating-room and there was no discomfort from the anesthetic.

CASE 2.—J. W. B., aged 86. The operation was a double herniotomy by Dr. H. Reineking. The duration of the anesthesia was one hour thirty minutes. The patient took the anesthetic nicely and awoke about five minutes after the gas was stopped.

CASE 3.—H. M. M., aged 65. The operation was a suprapubic prostatectomy by Dr. H. A. Sifton, the anesthesia lasting twenty-five minutes. For more than twenty-four hours this patient had not voided urine and the bladder was greatly distended with bloody urine. His temperature was high and he was not a good subject for anesthesia.

CASE 4.—B. S., aged 76. Colostomy was performed by Dr. F. H. Munkwitz, the anesthesia lasting thirty minutes; there was no post-operative discomfort.

CASE 5.—Mrs. F., aged 25. The operation was the dilatation of the uterus and removal of a dead fetus, by Dr. R. W. Holmes. Anesthesia lasted fifty-nine minutes. This patient was suffering from a severe toxemia and should be classed with "handicapped patients."

CASE 6.—Mrs. H., aged 76. Appendectomy was performed by Dr. W. T. Nichols. The anesthesia lasted thirty minutes and there was no discomfort following.

CASE 7.—H. S., aged 50. The operation was a herniotomy by Dr. D. J. Hayes. The anesthesia lasted one hour eleven minutes. This patient was suffering from nephritis.

CASE 8.—Mrs. V., aged 37. Vaginal hysterectomy was performed by Dr. R. G. Sayle, the anesthesia lasting one hour fifty-four minutes. Although this patient had been sick after a previous anesthetic she was not sick at this time and stated that the recovery from this was like waking from a natural sleep.

Satisfactory as this anesthetic is in selected cases, yet it is not entirely free from objections. One of the greatest objections to its general use is the expense. It requires considerable skill to administer the gas successfully, and one skilled in its use is not always available. Even when it is administered by one experienced in this work, the anesthesia which results is not as complete as with ether or chloroform. Sometimes it is almost impossible to obtain sufficient relaxation of the abdominal muscles. While this may be due to poor technic on the part of the anesthetist, yet it is not always the case. The incompleteness of the anesthesia is at times a hindrance to the operator, but it is less so as he becomes accustomed to this anesthetic. The color of the blood is dark, but this condition is of short duration and is not a cause for alarm.

It seems that this anesthetic is destined to come into more general use than at present. When we consider that it is the safest of all anesthetics, does it not merit some consideration in the choice of an anesthetic? It is not disagreeable to take and the short time necessary to get the patient asleep is an advantage over ether and chloroform. As a preliminary to ether it has a wide field.

CONCLUSIONS

Nitrous oxid and oxygen is the safest of all anesthetics.

Postoperative complications are less frequent after this anesthetic.

Its more general use should be encouraged.

498 Murray Avenue.

5. Crile: Wisconsin Med. Jour., August, 1909.
6. Teter, Charles K.: Thirteen Thousand Administrations of Nitrous Oxid with Oxygen as an Anesthetic, THE JOURNAL A. M. A., Aug. 7, 1909, liii, 448.

PLEURAL EFFUSIONS

AN ORIGINAL MEANS OF DRAINAGE IN PURULENT CASES WITHOUT RESECTION OF RIB *

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Effusion in the pleural cavity occurs under a great variety of conditions and circumstances. It may be serous, fibrinous, sanguinous, purulent, or a combination of two or more of these, such as serofibrinous, seropurulent, serosanguinous or sanguinopurulent.

The character and nature of the effusion depends somewhat on the cause of its production and the virulence of the germ with which it may be associated. It may be unilateral, bilateral, diffuse, localized or saeculated, depending also somewhat on the character of the effusion and the cause of its production. The unilateral effusion is by far the most common.

The etiology is even more varied than the character of the effusion. It occurs in all ages, the infant being more

* Read before the Buffalo Academy of Medicine.

prone to purulent effusion and the adult to the serous form. It may be caused by a simple pleurisy, traumatism, tuberculosis, nephritis, rheumatism, typhoid fever, pericarditis, malignant growths of the kidney or other organs, ovarian tumors, cirrhosis of the liver and various other conditions.

Purulent effusions occur frequently in infants and children after pneumonia; hence, when they develop they are often mistaken for unresolved lung tissue. I recall several instances of this kind in which empyema followed pneumonia and the condition was diagnosed as incomplete resolution or consolidated lung.

Fig. 1.—E. C., aged 5; sarcoma of kidney producing a serosanguinous effusion of the pleura, same side.

The most certain means of determining the existence of fluid and its character is by the use of an aspirating needle. If the needle be made sterile and the skin through which it is to be introduced is thoroughly disinfected it may be used with impunity, although Opie recently has stated that the removal of the fluid during the inflammatory stage may cause the leucocytes to break down, and change the serous exudate to a purulent one without any bacterial invasion, the serum seemingly having a restraining effect in preventing pus formation. Carelessness in the use of the needle will frequently cause a serous fluid to become purulent, or too deep an introduction of it may produce a condition known as pneumothorax.

The failure to obtain fluid is not conclusive evidence that it is not present. The failure may be due to the use of too small a needle, or its introduction in the wrong spot, the effusion being sacculated, or a faulty position of the patient; therefore, a good-sized needle should be used with the patient in a sitting posture.

Occasionally serous effusions, and purulent ones, too, when due to the pneumococcus, may be absorbed if in small quantity. Notwithstanding that it may be absorbed in a few instances when left to Nature, and its absorption greatly assisted by the use of drugs, I believe that in cases in which effusion is positively determined it should be relieved by mechanical means and not left to Nature, thereby running the risk of a collapsed lung or general sepsis.

If the fluid be serous, the simplest means of removal is by a Potain aspirator; but if the effusion be purulent, aspiration is useless and thorough drainage must be used.

DRAINAGE AND RESECTION

In cases of empyema in which the patient is desperately ill and septic, it has always seemed to me a too heroic and shocking method to have an inch of rib resected when the patient is in need of every spark of vitality and the most favorable conditions to recover. Scharlau[1] reports 56 consecutive cases in which the patients were operated on by primary exsection of a rib, of which number 18 died, a mortality of 33 per cent.

Various forms of drainage have been used to obviate the necessity of the resection of an inch of rib, but all methods under my observation or knowledge were failures. Rubber tubing is frequently tried, but the tubing will become compressed by the closing together of the ribs after the evacuation of the pus, and drainage is shut off. If there is sufficient space between the ribs, the tubing will become bent on itself by the expansion of the lung, crowding the pulmonary pleura against the end of the tubing, and thus shut off drainage. A soft catheter is sometimes introduced and will drain until the large mass has come away and the lung expands and the ribs come together; then the soft catheter becomes useless, and exsection of a piece of rib has to be finally resorted to and a soft rubber drainage inserted. Soft tubes, besides failing to drain, frequently work loose and are lost in the pleural cavity, and their removal requires a much more serious operation than the resection of a rib.

AUTHOR'S METHOD OF DRAINAGE

To obviate this I have made a tube which I believe will do away with resection of a rib in at least 85 per cent. of the cases. I have used it in a great many cases, and in every instance drainage was complete and a perfect recovery of the patient followed. It is very easy of introduction, and in an adult can be introduced under local anesthesia, either by the infiltration method or by freezing. If, on account of fear of pain, a general anesthetic is used, it is not necessary to crowd it to the point of surgical anesthesia. The technic is very simple. After the diagnosis of purulent effusion has been made the patient is prepared in the following manner:

Operation.—All clothing above the waist is removed and the patient is placed on the side of the table corresponding to the side in which drainage is to be made. The patient should be brought well to the edge of the table so that the operator may work easily and freely without turning the patient on his unaffected side. This I consider a very important point, whether the patient is to take a general anesthetic or not, as it gives

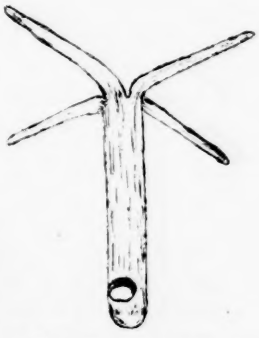

Fig. 2.—The author's empyema-tube.

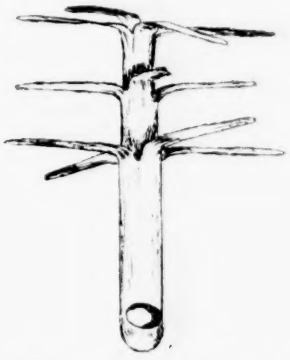

Fig. 3.—In nests of three.

the patient free use of his good lung; whereas, if he were laid on the side of his good lung the patient is put in greater danger from his inability to breathe. I have seen patients become cyanosed and moribund when placed on the side of the good lung for operation for empyema, and I am, therefore, very cautious in this matter. Under the back of the patient is to be placed a Kelly pad. The part is then scrubbed with ethereal soap and wiped with a clean aseptic towel or piece of absorbent cotton. The patient is not to be placed on a slab and exposed to a general scrub, which would cause a general blanching of the skin and congestion of the internal organs, and increase

1. Arch. Ped., August, 1897.

very much the danger from an already overworked and impeded heart. The advantage gained by the more thorough and complete asepsis is more than counterbalanced by the time consumed in scrubbing the patient and the extra amount of shock that is produced by exposure and resulting internal congestion.

After a speedy preparation, if the pus be not sacculated, the point of selection for the introduction of the tube is in the seventh or eighth intercostal space in the midaxillary line where the ribs are usually farthest apart and most easily separated, and the chest walls thinnest. A linear incision is made in the interspace parallel to the ribs, between which the tube is to be introduced.

The incision should be from one to two inches long, through the skin and intercostal muscles, care being used to avoid cutting the intercostal artery which lies on the under side of the rib. By hugging the knife to the superior surface of the rib this is easily avoided. When the incision is made down to the pleura the opening in the pleural cavity is made simply large enough to admit the tube. When the opening is made I usually take a pair of dressing or artery forceps and introduce them into the opening to separate the ribs and start the pus. The tube is then introduced until the pus runs freely.

Fig. 4.—Drainage-tube introduced in a case of empyema following pneumonia; patient aged 4.

If the tube is too long and injury is feared to the opposite pleura, gauze can be wound around the tube externally to limit the extent of its introduction. After the pus is thoroughly evacuated a loose dressing of gauze and a thick layer of absorbent cotton are laid over the tube to absorb the discharge and held in place by adhesive strips, and this covered by a bandage. The dressings should be changed daily for a few days. If at any time the tube should become plugged it can be easily removed, cleaned, sterilized and reintroduced without any pain to the patient, by applying a few drops of a 4 per cent. solution of cocain.

In none of my cases have I ever attempted to wash out the pleura. I believe that this is a dangerous procedure and should rarely be used. In all of my cases recovery has been rapid and uninterrupted and no relapses have occurred.

The average length of time for the use of the tube has been about twenty-one days.

The tube should be made of silver in nests of three sizes (Figs. 2 and 3), the diameter of the tube as well as the length being varied; the one can be used that is most suitable to the case under consideration. I have never had any difficulty in introducing this tube in patients, even in infants.

In presenting this paper I have not attempted to give an exhaustive discussion of the subject; I have purposely omitted many salient features, such as hygiene, morbid anatomy, therapeutics, diagnosis, and pathology and various modes of treatment. This can be read in any text-book in a much more pleasing manner than I can present it.

SUMMARY

Effusions in the pleural cavity are not to be diagnosed solely by flatness on percussion; neither is the respiratory murmur always absent on auscultation, as is popularly believed.

The most reliable method of diagnosing fluid and its character is by the aid of an aspirating-needle, and this is not always to be relied on.

The point which I wish to bring out in this paper is the drainage of purulent cases by means of a tube without resection of a rib, whereby the operation is changed from one of a major type to a simple, minor one, reducing very much the time required in doing it as well as the dangers accompanying it, thereby considerably lessening the mortality.

25 East Ferry Street.

A NEW METHOD OF DEMONSTRATING THE CAPSULES OF BACTERIA *

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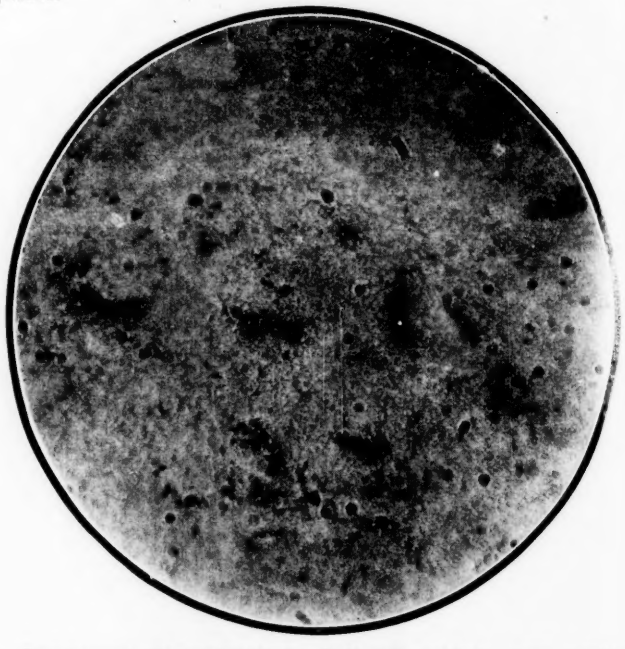
The most satisfactory methods at the present time for the staining of capsules of bacteria are those of Welch and Hiss. The method of Welch depends on the precipitation, by glacial acetic acid, of the mucin composing the capsule. The acid is then replaced by aniline gentian violet, which is added repeatedly, and finally washed with a 2 per cent. solution of sodium chlorid. Hiss employs ascitic fluid in making the smear. After drying and fixing in the flame, the film is covered with a 5 per cent. solution of gentian violet, stained for a few seconds and then washed with a 20 per cent. solution of copper sulphate.



Pneumococci demonstrated by India-ink method; from ascitic bouillon culture, twenty-four hours' growth.

The present method is an application of the principle involved in the India-ink "stain" for the *Spirochæta pallida*. The latter was adopted by Hecht and Wilenko early in 1909 and reported by Frühwald.[1]

The chief difficulty in the demonstration of bacterial capsules by the various stains proposed is the same as that encountered in the demonstration of the *Spirochæta pallida*, namely, an easy differentiation of the structural

* From the Pathological Laboratory of the Roosevelt Hospital, New York City.

1. München. med. Wchnschr., Dec. 7, 1909.

outlines in the stained film in which they are fixed. The principle of dark-field illumination overcame the difficulty in so far as the spirochete was concerned but did not prove sufficiently simple in application for general adoption outside of the laboratory. A drop of the approved ink of Günther Wagner makes the demonstration quite possible for anyone possessing a 1/12 inch homogene immersion lens. A drop of ink on a slide is rubbed up with a drop of serum, from a chancre, for instance, and is then drawn out into a fine uniform film. The spirals of the spirochete, being of appreciable thickness, are not covered by the ink and therefore stand out clearly against the dark background.

In the routine examination of throat smears of syphilitic patients in this hospital it was noticed that the numerous bacteria of the mouth were quite as clearly indicated and the idea of demonstrating the capsule of the pneumococcus presented itself. Various methods of applying the ink were tried; first, staining the bacteria in suspension, adding the ink and drawing out into film; second, mixing bacteria with ink and drawing out into a film as for spirochetes, allowing to dry and then floating stain on the inked surface. The second method is applicable to the demonstration of pneumococci in viscid sputum. The following method is proposed as that followed by the best results:

Make a thin smear of sputum, pus or bacterial culture in usual manner on a clean slide and allow to dry in air.

Fix by passing through flame in the usual manner.[2]

Stain with aniline gentian violet for five minutes, or stain by Gram, *i. e.*, aniline gentian violet, iodin, alcohol, water, fuchsin.

Wash with distilled water and blot with filter-paper.

Place a drop of India ink in center of stained smear, and draw to one end of smear by means of a strip of cigarette paper about half inch in width.

Allow ink to dry, add a drop of immersion oil and examine with 1/12 inch lens.

The pneumococci or encapsulated organisms will appear in a light-brownish background, the bodies stained deeply, the capsules faintly. The circumference of the capsules will be found to be surrounded by a condensation of fine ink particles which happily intensifies the effect. The physics of this phenomenon is readily understood. The bodies of the bacteria stand somewhat above the general level of the film. The ink in its fluid condition collects about the bacteria in the same way as water rises on a glass rod to form a negative meniscus.

The capsules may be demonstrated quite as well if the film is stained in an unfixed condition, a somewhat longer time being required for staining. Other stains, such as aqueous solution gentian violet and carbol-fuchsin, may be used, or, if pneumococci are to be demonstrated in blood-smears from mice, Jenner's stain may be used. In washing off the stain sterile water seems to have little or no effect in causing a shrinkage of the capsules in either fixed or non-fixed films. A 2 per cent. sodium chlorid solution or 20 per cent. copper sulphate solution may be used, but these cause an apparent granulation of the ink. A very small drop of Günther Wagner's (Wein and Hanover) India ink of the grade known as Peliken No. 541 will suffice. If the ink is too thick it may be diluted by adding a few drops of distilled water. Higgin's General Drawing Ink may be used but is much inferior. As the ink has a tendency to dry rapidly the process of coating the stained smear may be facilitated somewhat by applying the ink with a platinum loop in a line corresponding to the narrower dimension of the smear. Cigarette paper of uniform texture is employed, as one obtains in this way a very thin and uniform coating of ink. The edge of the paper is brought into contact with the line of ink and as soon as capillary attraction is established the paper is drawn over the surface of the bacterial film. But a few seconds are necessary for ink to dry. A drop of cedar-oil is placed directly on the surface of the ink, a cover-slip being unnecessary.

A portion of the smear is allowed to remain uncovered by the ink for the purpose of comparison. For example, if a Gram stain has been made the capsules may be demonstrated at one end of the slide and the question of the Gram properties decided at the other end.

A quicker method which gives good results consists in gently steaming with 5 per cent. aqueous solution of alcoholic gentian violet, pouring off excess, blotting and coating with ink. If this method is used one must not mistake the peripheral zone of a non-capsulated bacterium, where light is more readily transmitted, for a capsule. Any uncertainty which may arise in this manner may be overcome by comparing the size of the body of the presumably encapsulated organism with its size in the portion of the smear not coated by the ink. Often a slight change of focus will clear the difficulty.

The capsules—of the pneumococcus, for instance—are demonstrated best in cultures of ascitic bouillon or blood-serum or from blood of inoculated mice. In making smears from blood-serum or other media it is well to utilize the water of condensation.

If the smear contains a variety of organisms the differentiation of capsulated and non-capsulated organisms is rendered simple. The non-capsulated bacteria show no zone of lighter stain about their bodies, but on the contrary are surrounded by a condensation of the ink.

The selection of a suitable ink is of utmost importance. The two essentials are, first, that there be a certain amount of ink in solution, and, second, that the ink particles in suspension be of uniform and extreme fineness.

The method has been found of especial value in demonstrating capsules in old cultures of pneumococci. If a smear stained by the Hiss of Welch method is coated by the ink the capsules are found to stand out clearly in many cases.

Attempts to demonstrate flagella of organisms have been unsuccessful, both in stained and unstained films.

2. This may be omitted; if so, allow stain to act for ten minutes.

SPASTIC PARALYSIS *

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Spastic paralysis may be either a symptom of a functional neurosis or the result of an organic lesion. If the latter, its existence indicates an involvement of the pyramidal tract somewhere between the cortex of the brain and the anterior horns of the spinal cord. It seems best to discuss first the various lesions from which spastic paralysis may result and then briefly to describe those points which are of assistance in differentiating them from the purely functional morbid states.

Spasticity and the exaggeration of deep reflexes which is associated with it are both the result of increased muscular tonus, the latter, in turn, being caused by the

* Read by invitation before the Chicago Orthopedic Society, Jan. 13, 1910.

cutting off of the influences of regulation centers. The exact location of these centers has not been definitely determined, although there can hardly be any doubt that one of them—and that perhaps the most important one—is to be found in the cortex of the brain, while others are supposed to exist in the pons, the nucleus ruber, the spinal cord, the semicircular canals and the cerebellum. Increased muscular tonus may result in a slight stiffness only, so slight that it becomes evident only on voluntary movement, or it may lead to contractures so intense as to make all movement impossible. All conditions lying between these two extremes are usually designated as spastic paresis or spastic paralysis. We do, however, find that more or less weakness of the muscles almost invariably accompanies their rigidity. If the lesion causing the palsy destroys the myelin sheaths of the nerve fibers, but leaves at least some of the fibrillæ intact, then that symptom which is known to all as "intention tremor" is supposed to result.

The syndrome which results from destruction of the pyramidal tract alone is seen in its purest form in three morbid conditions: in the later stages of cerebral hemiplegia, in the primary lateral sclerosis of Erb and Charcot and in Little's disease. To the first of these I shall revert when discussing spastic paralysis of cerebral origin.

The Erb-Charcot malady usually begins during the second or fourth decade of life and is very slowly progressive. In it the spasticity in the legs dominates the clinical picture, while the paralysis is but slightly marked. Associated movements are frequently observed. The deep reflexes are greatly increased and show a tendency to jump to the opposite extremity. The cutaneous reflexes are usually intact or moderately decreased. The symptoms gradually reach higher levels, so that in the later stages we may find rigidity in the upper extremities as well as in some of the muscles controlled by cerebral nerves. Sensation, vasomotor and trophic nerves, sexual function, bladder and rectum show no deviation from the normal. In this disease the pathologist finds a primary sclerosis of the pyramidal tracts.

Senile spastic paralysis, resulting in very similar symptoms in at least some cases, is due to arteriosclerotic changes within the cord. Because of this pathologic basis, the syndrome is prone to be less pure than in the disease just described. In some rare instances of what is known as hereditary or family spastic paralysis we meet with virtually this same group of symptoms; and here, too, the microscope shows a degeneration of the upper motor neuron.

Little's disease, infantile spastic diplegia, is a disease in which again spasticity is the dominant feature. There is little, if any, paralysis. The legs are more markedly affected than the arms. The symptoms, which become noticeable very early in life, show a marked tendency to regression. Unfortunately this does not apply to the mental defect, which constitutes the saddest feature in such cases. Almost invariably either some prenatal deleterious influence or a premature, difficult or prolonged parturition can be found as etiologic factor. In some instances the disease seems due to an agenesis of the pyramidal tracts; in other cases a diffuse gliosis with increase in the number of blood-vessels in brain and cord, but without any circumscribed changes, has been found.

Combined with other symptoms we find the syndrome of spastic paralysis in most cases of disseminated sclerosis, in various forms of myelitis as a result of secondary degeneration of the pyramidal tracts, and from the same cause in compression of the spinal cord. Similarly to the other symptoms of general paresis may be added a spastic paraplegia.

In multiple sclerosis we find optic atrophy, or less frequently optic neuritis. Temporary paralysis of extrinsic eye muscles may occur. The pupils are often unequal in size, rarely rigid. Nystagmus or nystagmoid movements are often present. There is paresis with rigidity, often paraplegia. The deep reflexes are increased, the Babinski phenomenon often marked. The abdominal reflex is said by Mueller to be very frequently abolished even in the very early stages. My personal experience leads me to believe that the importance of this latter symptom has been rather exaggerated. Intention tremor and scanning speech are considered among the cardinal symptoms. Disturbances of cutaneous sensation may be lacking entirely; when present are usually slight and often evanescent. Occasionally neuralgic pains have been observed. The rectum and sexual function are but rarely affected in the early stages; micturition, however, is often impaired. Involuntary laughing and crying, apoplectiform attacks, ataxia, loss of memory and other slight mental defects, headache, not infrequently simulating megrim, are other symptoms worthy of mention.

In acute myelitis we find usually fever, slight pain in back, a feeling of fatigue, and paresthesias in legs in the early stages. Since the most common localization of the morbid condition is in the dorsal region of the cord, paralysis of the lower extremities often results, which is flaccid in the beginning, but soon becomes spastic. Twitching of muscles is commonly seen in the paralyzed limbs, both of spontaneous origin and after sensory stimulation. Both the deep and the cutaneous reflexes are increased. There is usually more or less complete loss of sensation below the seat of the lesion. The sphincters are almost invariably involved, bed-sores occur early and are very troublesome, and the occurrence of optic neuritis has been reported in a number of cases.

Chronic myelitis produces practically the same symptoms, but they appear more gradually. Fever is absent, unless caused by some complication like cystitis and decubitus.

Syphilitic myelitis may produce a great variety of clinical manifestations, which are partly due to involvement of the meninges, the spinal roots and the cord proper. It is differentiated from other forms mainly by the history or evidence of past luetic lesions, the existence of symptoms suggestive of multiple foci of disease, the great variability in the intensity of the symptoms, the preponderance of nocturnal pain, the frequency with which certain extrinsic eye muscles are paralyzed, the fact that the pupils are probably never perfectly normal, and—if all else fails—by the therapeutic test.

Compression of the spinal cord through fractures, dislocation or distortion of vertebræ causes a flaccid paralysis when the trauma results in a complete transverse lesion. Incomplete destruction of the cord located above the lumbar region results in spastic paralysis of the lower extremities with increased deep reflexes, partial loss of sensation and with pains radiating into the paralyzed extremities and paresthesia. The sphincters are usually—though not invariably—affected. The history of an injury would make the diagnosis an exceedingly simple one were it not for the fact that spinal hemorrhage may produce exactly the same symptoms. Where there exists a palpable deformity of the spinal column or where the Roentgen ray demonstrates its presence, this difficulty does, of course, not exist.

Tuberculous spondylitis is encountered more frequently early in life. Tuberculous foci in other parts of the body can usually be detected. A trauma to the spinal column often determines the localization of the process. In one of my own cases a woman with tuberculosis of the lungs and the bladder fractured a vertebra while attempting to lift a heavy box from the ground. Here a latent lesion must have weakened the diseased bone. The malady first causes dull pain along the spine, then rigidity of the same with sensitiveness to heat and pressure. Neuralgiform pain and paresthesia later change to hypesthesia or anesthesia. Atrophic paralysis of the muscle results. Here, too, if the seat of the lesion be above the lumbar enlargement, a flaccid paralysis of the lower extremities is followed by spasticity with increased myotactic irritability. Both sphincters usually suffer early.

Tumors may produce a very similar combination of symptoms, and this is especially true of carcinoma of the vertebræ. This latter is practically always metastatic, and a search for the primary lesion and consideration of the patient's age will prevent diagnostic errors.

When a lesion of the pyramidal tract occurs simultaneously with one of the posterior columns, we have added to the spastic paralysis more or less disturbance of sensation, both deep and superficial, of coordination and of the function of bladder and rectum. This occurs in the so-called combined system disease, sometimes in disseminated sclerosis, in dementia paralytica, diffuse myelitis, and in arteriosclerotic processes within the cord. Of these, only the first is to be described briefly here. Combined system disease may develop very rapidly or have a more chronic onset. Most often paresthesia or slight pain mark its beginning. Paresis of the extremities with spasticity, increased deep reflexes, associated movements, contractures, impairment of muscle, joint and bone sensation, ataxia, cutaneous anesthesia or hypesthesia, loss of control over bladder and rectum result; in some instances involuntary laughing and crying, dysarthria, nystagmus, vertigo and cerebellar ataxia follow an upward extension of the pathologic process.

Involvement of the pyramidal tracts plus anterior horns produces the clinical picture of amyotrophic lateral sclerosis. This disease usually begins between the thirtieth and sixtieth year of life and produces a very slowly progressive spastic paralysis, not infrequently unilateral in the earlier stages, combined with a degenerative atrophy of muscles, first seen, as a rule, in the small muscles of the hand. Fibrillary twitching, quantitative and later qualitative changes in the reaction to the electrical current are the rule. During the terminal stages bulbar symptoms, such as dysarthria, dysphagia, paralysis of the soft palate and of the tongue with fibrillary twitching and atrophy in the latter organ, weakness of the muscles of mastication and of the face are far from uncommon.

The central gray matter of the cord may suffer, together with the motor paths; and this combination we find in syringomyelia and sometimes in intraspinal hemorrhage. In typical cases of the former disease, atrophy of the muscles of the upper extremities, beginning in the small muscles of the hand and gradually spreading toward the trunk occur, together with spastic paralysis of the lower extremities. On the sensory side, pain and temperature sense are prone to suffer most. Trophic disturbances are common (Morvan's disease) as are those of the vasomotor nerves. Scoliosis and deformities of the thorax rarely fail to appear. Rectum, bladder and the sexual function suffer early. Bulbar symptoms often complicate the clinical picture. Sensory disturbances in the face, nystagmus, enophthalmus, ptosis and miosis have frequently been observed. In hematomyelia, once established, we may find absolutely the picture just described. The outset of this disease is, of course, very sudden, usually apoplectiform. In nine-tenths of all cases a history of trauma can be elicited, but in typhoid fever, hemophilia and pernicious anemia spontaneous hemorrhage into the cord has been observed. The symptoms are most marked within a few hours after the onset. Then there is always more or less improvement, unless the malady terminates fatally very soon.

Finally lesions outside of the cord proper may lead to spastic paralysis by pressure on that organ. This occurs, for instance, in tumor of the spinal column or the membranes, and then we often obtain a history of neuralgiform pains existing for some time, not infrequently for years before the appearance of other symptoms. Occasionally tremors of the muscles with rigidity and tonic contractions precede the more characteristic indications of a compression of the medulla spinalis. The spinal column itself is usually markedly sensitive to pressure, often also to extreme temperatures. In that rare disease which is known as "pachymeningitis cervicalis hypertrophica" the symptoms are absolutely those of a slow compression of the cervical cord. Almost invariably there is a history of luetic infection. Its extremely slow progress differentiates this trouble from others causing similar phenomena. Its duration is often from fifteen to twenty years.

An attempt at giving, however briefly, the differential diagnosis of cerebral troubles which cause spastic paralysis of the extremities is impossible here, since it would mean a review of practically the entire pathology of the brain. Palsy from cerebral disease is spastic. To this there is only one exception of real practical importance: During the first few days—rarely for a week or more—of ordinary apoplexy we find the useless muscles flaccid, but very soon their tonus returns and increases beyond the normal. This is true especially of those cases in which hemorrhage, embolism or thrombosis are the basis of the functional defect. In tumor or abscess of the brain, in encephalitis, etc., we are more liable to meet with spasticity from the very onset, and this is especially true of those lesions which involve an irritative process in the cortex. That cerebral disease causes hemiplegia most frequently, but may produce monoplegia or diplegia, need hardly be emphasized here.

With a brief consideration of those points which assist in differentiating organic from functional, i. e., hysterical spastic paralysis, I may conclude these remarks. First of all, permit me to call attention to the important fact that functional and organic disease may be combined in the same person, so that the existence, for instance, of stigmata of hysteria does not necessarily prove all nervous manifestations in that individual to be purely functional. I have seen an organic peripheral palsy of the facial nerve associated with functional paralysis of both extremities of the same side, a functional loss of cutaneous sensation in extremities affected by muscular dystrophy, etc.

The patient's age, the condition of his cardiovascular system, of his kidneys, his heredity, the existence or absence of previous evidence of a hysterical temperament, stigmata of hysteria, are often of diagnostic value. Fever, that large group of symptoms which are included under the terms of aphasia, the presence of conjugate deviation of the head and eyes, are, of course, evidence of organic disease. Monoplegias of hysterical origin

usually follow injury to the paralyzed extremity, something that can hardly occur in organic lesions. Facial paralysis is very rare in the functional, very common in ordinary hemiplegias; but one must be careful not to mistake a spasm of the mimic muscles for their palsy. It should be remembered, too, that in spastic paralysis due to destruction of tissue the deep reflexes are almost invariably increased, the superficial ones decreased or lost. True clonus does not occur in hysteria. Sensory disturbances are usually more profound in functional disease than those found from lesions of the brain. This we must concede, even if we do not believe with Charcot that all hemianesthesias in hemiplegias are purely hysterical.

A word about the significance of the Babinski reflex: Many neurologists see in it absolute and convincing proof of an organic lesion; others claim to have seen it in hysterical cases. My personal experience compels me to agree with the minority. I am certain that I have found a typical Babinski phenomenon in several cases of hysterical paralysis.

The condition of the abdominal reflexes is often a most important help in differential diagnosis. As already stated, they are decreased or lost on the paralyzed side in hemiplegias. It is claimed by most competent observers that such a change is never seen in purely functional trouble, even if there be anesthesia of the abdominal integument.

Since we rely to so large an extent on the condition of the deep reflexes in our diagnosis, it may be well to mention that a unilateral increase of tendon reflexes has been seen in hysterical monoplegia and hemiplegia and bilateral temporary loss of the same in a few instances of hysterical paraplegia. Decrease of both knee-jerks is far from uncommon in hysterical patients who have been bed-ridden for a long time and whose quadriceps muscle shows atrophy from inactivity. Very important is the difference in gait in the two forms of hemiplegia. While the hysterical patient will drag his leg along like an inert body, he who suffers from true palsy will bring it forward with that peculiar semicircular swinging movement with which all are familiar.

The influence of suggestion on the existing disability often clears the situation. But we must not fail to remember that even organic paralysis is influenced to a marked degree by excitement or mentally depressing conditions. That the presence of reaction of degeneration or, in the early stages of the malady at least, even quantitative changes in the reaction to the electrical current, is conclusive evidence of organic trouble, goes without saying.

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A Comparison of Municipal Expenditures in Health Matters.—In an article on "Revenues and Expenditures of Cities," Prof. Charles E. Merriam (*University of Chicago Magazine*, March, 1910) finds by a comparison of figures that American cities lay more stress on fire protection and less on charities and correction than do European cities, and that Boston and London seem to have more in common as regards the importance of health administration than do Boston and Chicago. Although per-capita expenditures for recreation in Glasgow and St. Louis are identical, yet in the former city about two and a half times as much is obtainable for the same outlay as in the latter city. New York and Vienna agree in ascribing more importance to schools than do Glasgow and Philadelphia. The greater importance given to fire protection in American cities is said to be due to the more flimsy construction, and the lesser importance of charities and corrections is ascribed to the lesser amount of poverty and the greater development of private charities.

ANIMAL EXPERIMENTATION IN RELATION TO OUR KNOWLEDGE OF SECRETIONS, ESPECIALLY INTERNAL SECRETIONS*

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INTRODUCTORY REMARKS

Progress in pure science and in industry brings essentially luxurious delights to mind and body; the object of advance in the science of medicine, however, is in the first place to procure indispensable necessities for life and health. Necessities certainly come before luxuries. Ought we not expect to find sane humanity devoting its energies above all to the furtherance of progress in the domain of medicine? Unfortunately, just the reverse seems to be true; medical science again and again has to struggle with obstacles in its forward march. These obstacles are not only those which are wilfully thrown in its path by ignorant, ill-balanced and noisy individuals of both sexes; even the noble tendencies of pure science not infrequently have been quite obstructive to a wholesome development of the science and practice of medicine. The root of the evil is that not many have a vivid conception of the immensity of the gap which existed and still exists between what medicine really ought to be and what it was and largely still is, nor a proper conception of what the small group of workers have actually accomplished in the various departments of medicine.

In the following pages I shall give an outline of the progress made in our knowledge of glandular secretions, especially of the marvelous progress made in a brief time in our knowledge of internal secretions. By this outline I intend to demonstrate the inestimable service which experiments on animals have rendered to that feature of the science of medicine. The authenticated facts in this paper may thus be instrumental in disproving insinuations and accusations often raised against animal experimentation by two diametrically opposite camps: high science and low ignorance; the former frequently insinuating that the results are not sufficiently exact to be ranked as scientific work, and the other that animal experimentation has never been of any use either to science or to the practice of medicine.

The term "internal secretion" has been in use less than two decades, and the instructive facts which are covered by that term began to make their appearance not much longer than a quarter of a century ago. The knowledge of this form of secretion, young as it is, compares favorably with the knowledge of glandular secretion in general, which can look back on a history of nearly four centuries. The following two factors are responsible, I believe, for the marvelous progress of this new chapter of experimental medicine. In the first place, the recent investigations of the ductless glands were carried on purely by biologic methods of research. The second factor is to be found in the important fact that these investigations had the great advantage of a harmonious cooperation of critical animal experimentation, scientific clinical observations and intelligent analysis of surgical results. I lay great stress on the biologic character of the method of investigation as an

* This paper is one of the series prepared for and reprinted by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Thirteen of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, surgery, internal secretions, protozoan tropical diseases, etc.

important factor in the progress of medicine. To my mind even the growth of our knowledge of glandular secretion in general can be traced back essentially to the purely biologic investigations which in the course of the slow development of the medical sciences in the past few centuries were carried on spasmodically. I shall attempt to illustrate this statement by some data, but before doing it I shall try to elucidate what I mean by the term of pure biologic research.

BIOLOGIC METHOD OF RESEARCH

The marvelous growth of the natural sciences since the sixteenth century can be traced back to the scrupulous observation of the following two simple requirements of methods of observation: (1) The phenomena of nature have to be studied by actual observations, and (2) the correlations of these phenomena have to be established according to their respective merits and free from any extraneous considerations. The first requirement needs no discussion; it is evenly applicable to the investigations of all the divisions of natural science. The second requirement, however, presents different aspects in the different domains. As far as the inorganic world is concerned, the requirement is quite simple; it is directed chiefly against the inveterate interference of metaphysical theories with the interpretation of natural phenomena, and the requirement of freedom from such interference is here self-evident. Science has to deal with the provable; and since metaphysics avowedly deals with unprovable problems, it is evident that these two domains cannot coincide. It is different, however, when dealing with the phenomena of the living world. The correlation of these phenomena can be studied in the first place as in the inorganic world, exclusively with relation to themselves, without regard for extraneous domains. This method of study of the phenomena of the living world I designate as the purely biologic method of research. The living phenomena, however, can be also studied with a view of reducing them to phenomena of the inorganic world. This line of study I would designate as the physicochemical study of biology.[1] It is evident that in the latter line of investigation of living phenomena the rational requirement of freedom from extraneous considerations suffers a serious setback.[2]

The history of medical science shows that there was, consciously or unconsciously, a continual struggle between the followers of the two methods of investigation, sometimes the one, sometimes the other gaining the supremacy. This is not the place to enter on the history of this struggle; nor shall I attempt to dwell here on the merits of each side. There can be no doubt that both methods are absolutely legitimate, in fact, indispensable, and ought to supplement each other. I wish, however, to record here my opinion that, as a matter of fact, medical science in all its aspects has profited so far vastly more from the purely biologic researches than from the physicochemical researches in biology. This statement certainly holds good with reference to our knowledge of internal secretions; but, as stated above, it is true also, at least to a large degree, for glandular secretion in general.

GLANDULAR SECRETION

Previous to the new era in anatomy all small semisolid brown structures in the body were designated as glands. The filtration of the blood was the function assigned to these little lumps of tissue. With the regeneration of anatomy by Vesalius and other anatomists of the sixteenth century the distinction was made for the first time between secreting and blood glands. The physiology of secretion, however, did not benefit very much from the great progress made in anatomy. In the sixteenth century even the brain was considered as a secreting organ: it picked out the vital spirits from the blood and secreted mucus through the lamina cribrosa into the pharynx. Studies on the dead body alone, the chief object of study in the sixteenth century, could not reveal the real action of the living gland. It was not until the middle of the seventeenth century that the knowledge of glandular secretion began to assume a rational scientific aspect. Many writers trace this knowledge back to Malpighi's work on the liver, which was published in 1665. It is, however, a fact that important communications were made on the secreting glands previous to the appearance of Malpighi's work. It was the marvelous discovery of the circulation by Harvey, proclaimed to the world in 1628, which started the physiologic studies on the glands. Harvey discovered the circulation by studying it in living animals. This gave a great stimulus to the employment of animal experimentation in the study of the phenomena of life, and for many decades there was a rich harvest of discoveries of important facts in physiology.[3] By experiments on animals Johann Georg Wirsung (or Moritz Hoffmann) discovered in 1642 the duct of the pancreas, Thomas Wharton discovered (in 1652) the duct of the submaxillary gland, Nicolas Stenson discovered (in 1662) the duct of the parotid gland and also the lachrymal duct, and Rivinius (in 1679) discovered the ducts of the sublingual glands. De Graaf succeeded in 1664 in collecting pancreatic juice from the living animal, and Brunner discovered (in 1686) the glands of the duodenum, designated by his name. Malpighi (1628-1694), besides his great work on the liver, the gall-bladder, the bile ducts and on the kidneys, studied also the sweat and sebaceous glands of the skin. All these discoveries led up to the conception of (an external) secretion by glands provided with ducts. In contrast to these glands another group was designated as ductless glands, including in this group at first even the lymph glands. After the discovery by Aselli (1623) of the chyle-bearing vessels, and the discoveries by Pequet (1651), by Budbeck (1652) and by Thomas Bartholinus (1653) of the lymph vessels, receptaculum chyli and the thoracic duct, the lymph glands were separated for good from the other glands. The ductless glands comprised then the spleen, thymus, thyroids and adrenals.

1. The physicochemical study of biology should not be confounded with the employment of physicochemical methods in biologic research. All researches of function are necessarily carried on by physical or chemical methods. For instance, the removal of an organ is a physical, and the injection of an extract of this organ is a chemical method; at the same time the object of such investigations is of a purely biological character; it tries to establish the importance of that organ for the life of the animal. But the attempt to ascribe the function of an organ to some well defined chemical constituent of that organ, for instance, to ascribe the normal action of the thyroid gland to its iodine content, belongs to the chemical studies of that organ. It is a fact that even distinguished physiological writers are not infrequently guilty of confounding the employment of physicochemical methods in the study of biology with the physicochemical studies of biology.

2. In these attempts to reduce the living phenomena simply to those of physics and chemistry even traces of metaphysical dictates can sometimes be detected, if we keep in mind that the interference of materialistic metaphysics is not much less deleterious to wholesome studies of natural sciences, than the interference of spiritualistic metaphysics

3. Animal experimentation was then a much less dangerous occupation for the investigator than the study of anatomy on a human cadaver. The leaders of human destiny at that age had no hestitation in killing men and even mutilating their dead bodies for any trivial reason, but objected to the use of the dead bodies of men when medicine and science could profit by it—just as the misguided of both sexes of our own day are ready to kill and maltreat all sorts of animals for personal profit, sport or vanity, but manifest a perverse moral indignation when such animals are used for the benefit of medicine and mankind.

Near the close of the seventeenth century the biologic researches into the nature of glands came to a standstill. Physico-chemical investigations and interpretation of living phenomena came to the front, and iatrophysicists and chemiaters held the stage for a good many years. In fact, all pure biologic researches seemed to have become silenced, at least greatly overshadowed, by the tendencies of physico-chemical investigations of biology, which gradually forged their way to the front in the course of the seventeenth century. The mathematical and physical sciences possessed a lustre given to them at that epoch by the brilliant astrophysical researches of Galileo (1564-1642) and Kepler (1571-1630). The good work of Borelli (1608-1679) on animal motion, which was based on purely mechanical principles, the mechanico-biologic investigations of members of the newly organized Royal Society, for instance, the demonstration by Robert Boyle (1627-1691) of the danger of the vacuum to life, the demonstration of Robert Hooke (1635-1703) of the importance of artificial respiration, or the introduction of transfusion by Richard Lower (1631-1690)—all these factors were instrumental in demonstrating the fruitfulness of mechanical and physical analysis of living activities. The significance of chemical processes had begun to impress the minds of medical men already in the previous century by the aggressive teachings of Paracelsus (1490-1541). Under the influence of the teachings of Van Helmont (1577-1644), the discoverer of carbonic-acid gas; of Franciscus Sylvius (1604-1672), the founder of the first chemical laboratory, and of their pupils, chemical interpretation of biologic phenomena developed into a leading system.

For a very long period iatrophysicists and chemiaters struggled for supremacy in the fields of biology and medicine, pushing pure biologic research nearly entirely out of sight. During the eighteenth century practically no progress was made in the knowledge of glandular secretion. It is true that at about the middle of that century some experiments on gastric secretion were carried out on aimals by Reaumur (1683-1757), by John Hunter (1728-1793), and especially by the celebrated Abbé Spallanzani (1729-1799). But these experiments dealt chiefly with the process of gastric digestion and the nature of gastric juice; they did not concern themselves with the character of the glands and the act of secretion. The first important biologic investigation of secreting glands came to light in 1830; it was the celebrated comparative anatomic study of the secreting glands in the entire animal kingdom by Johannes Müller. About a decade later the animal cell was discovered; this gave a great stimulus to pure biologic researches, but they were essentially of a morphologic nature. The studies of the functional side of life became dominated, however, even more than ever by the physicochemical conceptions of that epoch. The brilliant physicophysiologic investigations of Du Bois Reymond, Helmholtz and Ludwig and their pupils, at about the middle third of the last century, were especially instrumental in establishing the absolute reign of mechanical conceptions in the domain of physiology. It was in harmony with these physical tendencies that secretion was looked on, as in olden times, as a mere mechanical process of filtration. A great deal of energy has been spent and brilliant experimental work done in support of this contention. Did these marvelous efforts greatly enrich our knowledge of the processes of secretion with actual facts? I believe that the attitude of Heidenhain[4] in assuming a "vital activity" of the epithelial cells was by far more fruitful in this direction. With the assumption of a vital activity Heidenhain claimed nothing else but the right to study living phenomena with reference to themselves. He did not deny that this vital activity might be explained one day by some new physical and chemical laws. He merely found it more profitable to study at present the living phenomena as they are, preferring no physicochemical interpretation to a premature interpretation by imperfectly known inorganic laws. Thanks to these efforts of Heidenhain and his followers, considerable progress has been made in the recognition of the processes of secretion and the intracellular changes accompanying them. We have thus now recognized the fundamental fact that secretion is a specific function of the glandular cells, just as contraction is a specific function of a muscle cell. The difference between the various secretory products has its origin in the specific secretory activities of the cells belonging to the different secretory organs.

I shall, of course, not enter here on a recital of the great amount of work done in the last sixty years on glandular secretion. I believe, however, that it is perfectly safe to state, as I did above, that the important facts which we know at present with regard to glandular secretion in general were discovered chiefly by means of purely biologic investigations.

THE FUNCTION OF DUCTLESS GLANDS

Since the discovery of the ducts of the various secreting glands, the spleen, thymus, thyroid and suprarenal glands were grouped together, as stated before, under the term of ductless glands. That term is still in use in the literature, except that in this group the spleen is now replaced by the pituitary body. The glands of this group have been known for more than four centuries. What are their functions and do they have any? Schäfer[5] tells us of the satirical comments made by Montesquieu nearly two hundred years ago on various essays offered in solution of the prize question: What is the use of the suprarenal glands? "Perhaps chance may some day effect what all these careful labors have been unable to perform," says Montesquieu. More than a century later we find the brilliant physiologist, Magendie,[6] telling his hearers:

> I have nothing to say on the suprarenal capsules. Since nobody any longer believes in *atra bilis* the capsules have ceased to be its secreting organ. . . . What function does the thyroid gland have? Nobody knows it. . . . That organ surely deserves the investigation of physiologists. . . . *Does it not attain in cretins an enormous size*[7] while the other organs become reduced?

However, we need only go back less than three decades to find the same profession of ignorance by competent authors. In the well-known work by Herrmann published in 1883,[8] it is stated in one line that we know nothing of the functions of the thyroids and adrenals. However, it was in the very same year that the "chance" came of which Montesquieu wrote. The precious chance came in the first place as a culmination of various activities with reference to the significance of the thyroid glands. But the light which was shed on the vital importance of these glands lit up the entire field of internal secretion which had remained impenetrably obscure for many past centuries.

4. Heidenhain: Hermann's Hanhb. d. Physiol., v, Part 1.

5. Schäfer: The Oliver-Sharpey Lecture, Brit. Med. Jour., May 30, 1908.

6. Magendie: Leçons sur le système nerveux, 1841.

7. Italics mine. We know now that the opposite is true.

8. Handbuch d. Physiol., v, 2.

THE IMPORTANCE OF THE THYROID GLANDS

In the course of the preceding centuries numerous theories were put forward regarding the significance of the thyroid glands. However, already at an early part of the last century various writers, among them especially Hofrichter,[9] analyzed these theories and discarded them. The theory which in the second third of the last (19th) century gradually gained most favor was the one put forward in the eighteenth century by Prochaska, namely, that the thyroid as well as the adrenal glands had, like the thymus, no significance for extrauterine life. It is true that already in the fifties of the last century experiments were published indicating the great importance of these glands in adult life. We shall speak of these experiments later more fully. These publications made, however, no impression on contemporary physiology. That science was dominated then, as stated before, by physicomechanical conceptions and manifested neither great interest in pure biologic researches nor special confidence in their results. There was (and still is) an ever-present tendency among the approved physiologic investigators to ascribe such results to some inadequate technic or to some carelessly overlooked secondary factor.

The first step in the new direction was made within the clinical domain, at first without apparent bearing on our question. In 1873 Sir William Gull[10] reported 5 cases of middle-aged women who had a cretinoid appearance, a more or less bulky form and other symptoms which characterized these cases as presenting a separate and new type of disease. In 1878 W. Ord,[11] who had had similar cases under observation since the sixties, reported one case which came to autopsy. The most striking finding was the mucin-like masses in the subcutaneous tissue which caused Ord to designate the new type of disease as myxedema. Among the post-mortem findings of this case atrophy of the thyroid glands was noted. The next contribution came from the surgical domain. With the general introduction of antisepsis at the beginning of the seventies, surgeons ventured to extend their activities to regions which formerly seemed to be inaccessible to their interference. Large goiters which are prevalent in some regions, especially in Switzerland, were now treated by radical operation. In April, 1883, Kocher,[12] of Berne, gave an extensive report of the after-effects of such complete removals of goitrous glands. The patients showed a peculiar complex of symptoms which Kocher designated as cachexia strumipriva. He looked then on the symptoms as being due to some degree of asphyxia caused by this operation. A few months before Kocher's report appeared Jaques Reverdin[13] of Geneva, made a similar but less extensive report, which, however, seems to have at first passed unnoticed. In November of that year Felix Semon[14] called the attention of the Clinical Society of London to the similarity of the symptoms of the postoperative cachexia with those of myxedema and suggested that in both cases the complex of symptoms might be due to an absence of the thyroids, which glands, therefore, may be of fundamental importance to the life of the human adult. This statement made such a deep impression on the society that a committee was appointed to investigate the entire subject. It should be mentioned that a few months before Reverdin,[13] in a second communication, recognized the similarity of the two types of phenomena and designated the complex of symptoms which follows the complete removal of the goitrous thyroids as operative myxedema. This communication also escaped general notice. But it was the means of calling forth the statement of Schiff,[15] who was then professor of physiology at Geneva, that in experiments made by him as early as 1856 he found that many of the animals succumbed after the complete removal of the thyroid glands. These results he communicated at first to the academy at Copenhagen and later made them known in a separate communication which appeared in 1858.[16] These communications apparently made not the slightest impression on contemporary physiology. Schiff[17] now repeated and extended his former experiments and found that especially in dogs the complete removal of the thyroids is mostly a fatal operation, the animals dying with symptoms quite similar to many of those observed after complete (surgical) removal of goitrous thyroids in human beings. A statement of great interest was soon made by P. Bruns.[18] He discovered in the literature from the sixties a report by P. Sick[19] of a case of complete removal of goitrous thyroids in a young boy.

He hunted up the operated subject and discovered that the patient, who was now at the end of the thirties, had the size and appearance of a mentally and physically backward boy—a surgical cretin. Autopsies of natural cretins then revealed the further fact that the thyroid glands were deficient in these cases.

These various communications brought to light the following series of new facts: (1) natural absence of the thyroids in adults causes myxedema; (2) natural absence of the thyroids in children causes arrest of growth and cretinism; (3) complete removal of the normal thyroids in animals is a fatal operation; (4) complete surgical removal of the goitrous glands in children causes surgical cretinism; (5) complete removal of these glands in adults causes surgical myxedema. These facts indicated clearly enough that the thyroid glands are of fundamental importance to the health and life of man and animal. Schiff,[20] however, brought forward still stronger evidence in favor of this thesis. He implanted in the peritoneal cavity of an animal one of its own thyroids and found that this animal survived for a long time the removal of the second thyroid—a sure proof that the fatal result of the complete removal is caused by the absence of the function of the thyroid gland and is not due to secondary lesions caused by the operation.

In the following years numerous experimental investigations in animals confirmed the main facts. The most extensive and important of these investigations were those of Victor Horsley,[21] then a member of the above-mentioned committee appointed by the Clinical Society, and of Ferdinand Fuhr.[22] As an instructive fact we shall mention that these experimental investigations were carried on mostly by non-official physiologists. Of the official physiologists it was H. Munk[23] alone who took an active share in this work, and this with the persistent claim that the observed results were due to an irritation of the adjoining nerves during the "careless" removal of the thyroid glands. There were also a few

9. Hofrichter: Meckel's Arch. f. d. Physiol., 1820, vi, 186; Fuhr: Arch. f. exper. Path. u. Therap., xxi.
10. Gull: Tr. Clin. Soc., 1873, vii.
11. Ord, W.: Tr. Clin. Soc., 1878, xiii.
12. Kocher: Arch. f. klin. Chir., 1883, p. 254.
13. Reverdin: Rev. méd. de la Suisse romande, 1883.
14. Semon: Tr. Clin. Soc., November, 1883.
15. Schiff: Rev. méd. de la Suisse romande, 1883.
16. Schiff: Untersuchung über die Zuckerbildung in der Leber, etc., Würzburg.
17. Schiff: Arch. f. exper. Path., xviii.
18. Bruns, P.: Samml. klin. Vortr. (Volkmann's), 1884, No. 244.
19. Sick: Württemb. med. Cor.-Bl., 1867, No. 25.
20. Schiff: Rev. méd. de la Suisse romande, 1884.
21. Horsley: Suppl. Tr. Clin Soc., 1888, xxi.
22. Fuhr: Arch. f. exper. Path. u. Therap., 1886, xxi, 387.
23. Munk: Sitzungsb. d. Berl. Akad. d. Wissensch., 1887, p. 823; 1888, p. 1059

reports of experiments in which no profound effects were observed to follow the complete removal of the thyroids. Some of these reports, however, were based, as Fuhr conclusively has shown, on erroneous observations. The submaxillary glands were removed instead of the thyroids. Other failures could be explained by the facts that either the removal was in fact not complete, some parts of the thyroid remaining behind, or that in these cases there were some accessory thyroids which had not been removed.

All these investigations had in the first place the one important practical result, that surgeons stopped the practice of complete removal of goitrous glands. This they could do the more readily, since the investigations brought the important fact to light that the presence of only a small part of the thyroid was sufficient to keep up its function and to obviate the ill-effects of the removal.

The complete removal of goitrous glands was followed not only by serious chronic symptoms, but also by severe acute attacks of tetany, terminating sometimes fatally. Seven such deaths were reported from the celebrated clinic of Billroth in Vienna alone.[24]

The above-mentioned experiments of Schiff on the implantation of the thyroid in the abdominal cavity of dogs gave rise to the attempts of various surgeons to cure operative and normal myxedema by grafting pieces of human thyroid, removed at operations, into the peritoneal cavity or in the subcutaneous tissue of such patients. The most striking result of such a procedure was reported by H. Bircher[25] in one case. After each new implantation practically all pathologic symptoms disappeared for a long period. The success, however, was not permanent. Apparently the grafted fragments did not resume at the new place the function of the thyroid; they gradually became absorbed. The fact, however, that during the absorption of the grafted pieces the symptoms of the cachexia were kept in abeyance gave rise to the idea that the administration of an extract of the thyroid might perform a similar office. The first attempts to test this idea were made by Colzi[26] and by Vassale,[27] who injected such extracts intravenously into animals. In 1891 George Murray[28] established the important fact that subcutaneous injection of thyroid extract in man is capable of abolishing all the symptoms of myxedema. This was followed by the announcement of Howitz,[29] in July, 1892, and by Mackenzie[30] and Fox,[31] in October of that year, that the same result can be obtained by the administration of the thyroid gland, even cooked, by the mouth. The last named communications demonstrated that the effective principle of the gland is destroyed neither by heat nor by digestion. It was further evident that the action of the gland was not specific, inasmuch as the extract of glands of various species of animals acted favorably on human patients. These statements were soon generally confirmed all over the world and thyroid therapy became a well-settled fact.

We thus learn an impressive lesson. While the mere reasoning of many brilliant minds carried on for four centuries shed no light on the significance of the thyroid gland, the intense activity of modern experimental medicine managed to bring to light in less than ten years the following important facts with regard to these glands: (1) the thyroids are of fundamental importance to life and health; (2) a new disease was established: the "natural" atrophy of the thyroid in adult life leads to myxedema; (3) the real nature of a well-known disease was recognized: cretinism is infantile myxedema; (4) complete removal of goitrous thyroids during infancy leads to cretinism and their removal during adult life may bring on either myxedematous cachexia or tetany; (5) surgeons learned two important lessons: on the one hand, not to perform a radical removal of the goitrous glands, and, on the other hand, that the ill-effects can be obviated by leaving behind a small part of the gland; (6) extract of the thyroid gland is capable of removing the symptoms due to the natural or artificial absence of this gland. In short, by the methods of biologic research we learned in less than ten years a great deal of the physiology, pathology and therapy of the thyroid glands.

The studies were fruitful in many other directions, which, however, can be only indicated here by a few words. By experiments on animals and by observations on human beings it was found that the unrestricted administration of thyroid extract brings on a condition which is very similar to that pathologic complex known as exophthalmic goiter or Graves' disease. This fact led up to the conception that Graves' disease consists in the normal overproduction of the thyroid function—hyperthyroidism. This conception was fruitful in developing medical and surgical therapeutic measures on which we cannot dwell here.

Furthermore, it was found that thyroid extract has a therapeutic value in diseases other than myxedema and cretinism, for instance in obesity, scleroderma and some other skin diseases.

In the course of all these investigations the important discovery was made by Baumann,[32] in 1895, that the thyroid contains iodin in an organic compound which some believe to be closely connected with the main function of the gland. It was further found that the thyroid extract exerts a certain influence on the resistance of some animals to some poisons and that this influence is in proportion to the iodin content of the gland.[33]

There is, however, one brilliant chapter in the investigations of the thyroid which should be told in somewhat greater detail. The above mentioned investigations on the thyroid left some unexplained points. The effects of the radical removal of the thyroids in human beings were far from being uniform; sometimes myxedematous and sometimes tetanic symptoms prevailed. In animals the effects of the removal of the thyroids were nearly exclusively of a tetanic character. Finally the most puzzling fact was the apparent harmlessness of the removal of the thyroids in some species of animals, as, for instance, in rabbits. At first the idea suggested itself that with regard to the importance of the thyroid there was a difference between carnivorous and herbivorous animals. Further animal experimentation, however, threw a flood of new light on these puzzling problems.

24. See Anz. d. k. k. Gesellsch. d. Aerzte in Wien., 1883, No. 31. If the animal experiments which shed so much light on our subject had been carried out before the attempts were made by surgeons to perform the complete removal of goitrous glands in human beings, a great deal of misery and many deaths might have been spared. Experiments on various species of animals should be extensively performed before any new serious operation on human beings may be attempted. But while nobody thinks of dictating by law to the surgeon what operations he may or may not perform, there are individuals all over the world who wish to have laws enacted suppressing or crippling experimentation on animals. What a perversion of reason and morals!
25. Bircher, H.: Samml. klin. Bortr. (Volkmann's), 1889, No. 357.
26. Colzi: Sperimentale, 1884.
27. Vassale: Centralbl. f. d. méd. Wissensch., 1891, p. 14.
28. Murray: Brit. Med. Jour., Oct. 10, 1891.
29. Howitz: Lancet, 1892, ii, 1213.
30. Mackenzie: Brit. Med. Jour., Oct. 29, 1892.
31. Fox: Brit. Med. Jour., Oct. 29, 1892.
32. Baumann: Ztschr. f. physiol. Chem., xxi, 319.
33. Hunt, Reid: Studies on Thyroid, Bull. No. 47 Hyg. Lab.

THE PARATHYROID GLANDS OR THE EPITHELIAL BODIES

Sandstroem[34] discovered in 1880 small definite bodies consisting of cell masses in proximity to the thyroids. He gave them the name of parathyroid glandules. Sandstroem assumed that these cell masses represent undifferentiated embryonal thyroid tissue. Very little attention was paid to these bodies until 1892, when Gley[35] conceived the hypothesis that these bodies play an important rôle in the phenomena following the removal of the thyroids. On the basis of this hypothesis he discovered the important fact that after the removal in rabbits of the two free parathyroids, in addition to the removal of the thyroid glands, well-defined tetanic manifestations occur also in these animals. Removal of the thyroid glands alone or of the two parathyroids alone is not followed by any untoward symptoms. The communications of Gley were instrumental in bringing out a large number of researches dealing with the significance of the parathyroids, of which we shall mention here only two. A. Kohn[36] brought out by careful histologic investigations that there are most frequently four parathyroids, two of which are frequently imbedded in the tissue of the thyroid glands. The removal of the thyroids, therefore, also removes two of the parathyroids, and the removal of the thyroids and parathyroids in Gley's experiments meant complete removal of all the parathyroids. Kohn established further that the parathyroids do not represent an embryonic stage of the thyroid tissue, but are independent bodies composed of epithelial cells, and he suggested the name of epithelial bodies for the parathyroids. The second series of important researches were those of Vassale and Generali,[37] who reported a long series of experiments in which they succeeded in removing in animals either the thyroid tissue alone or the parathyroids alone, and arrived at the conclusion that the removal of the thyroids alone leads to myxedematous symptoms, and the removal of the epithelial bodies alone leads to tetanic symptoms. It cannot be claimed that this problem is even now completely solved. But the mass of evidence at hand is overwhelmingly in favor of the view, that the epithelial bodies are independent organs, the removal of which favors the onset of tetanic manifestations, and there can hardly be any doubt that the tetanic symptoms following in some cases the radical removal of the thyroids are due to the simultaneous removal of all the parathyroids or the profound interference with their vascular supply. The variability of the anatomic relations of these bodies with the thyroid glands explains the variations in the surgical and experimental results. As to the functional relations of these two organs to one another, some believe that they are entirely independent of one another; others again assume that there is a definite interdependence between thyroids and parathyroids; but as to the nature of interdependence some believe with Gley that it is supplementary; others that it is antagonistic in character. The subject is not yet settled and we need not dwell on it.

This new theoretical knowledge brought about by animal experimentation is commencing to bear important practical fruit. In the first place surgeons are at work to devise methods of operation which permit the removal of the thyroid without injuring or interfering with the blood-supply of all the parathyroids. Furthermore, surgical and medical methods are studied, by means of which the evil consequences can be adequately dealt with. Surgeons abroad and in this country[38] are trying to develop methods of grafting the parathyroids; they have been implanted in the abdominal cavity, in the spleen and in the cavities of the long bones. The success, however, will become complete when surgeons learn to graft the organs (and the thyroids) by means of an end-to-end vascular suture by the now well-known method which was introduced into surgery, especially by the experimental work of Alexis Carrel. There are also some promising medical methods of treatment for the deficiency of the parathyroids. According to Beebe,[39] the nucleoproteids of the parathyroids are capable of controlling the tetanic convulsions following the removal of the parathyroids. Furthermore, MacCallum and Voegtlin[40] discovered that the postoperative spasms can be controlled by the administration of calcium. Through the investigations of Erdheim[41] it was found that, in rats at least, the ablation of the epithelial bodies leads to some disturbance of the calcium metabolism. MacCallum and Voegtlin believe that the removal of the parathyroids leads to a deficiency of calcium in the body. While this theory may be incorrect, the fact is that the administration of calcium relieves the tetanic symptoms. MacCallum and Voegtlin established this fact in their experiments on animals. Calcium already has been used with success in postoperative tetany in human beings. In fact, calcium proved to be useful in the treatment of tetany in children due to other causes than the removal of the parathyroid.

Experimental medicine may well point with pride to this achievement. Little bits of tissue, the existence of which was not even known three decades ago, were recognized as organs of great importance to life and health, and medicine and surgery are already far on the road in learning how to avoid their injury and how to mend the evil consequences of such injuries. It is impossible to conceive how such knowledge could have been acquired without animal experimentation.

THE SUPRARENAL GLANDS

These ductless glands were described by Eustachius in 1543. Although thus known to medicine more than four centuries, our knowledge regarding their functional significance is, as stated above, of recent date. It began with a clinical observation. In 1855 Addison described a disease which is now known by his name, in which the adrenals were found to be affected. In the following year Brown-Séquard[42] published experiments showing that the removal of both capsules in animals leads invariably to an early death of the animal. The results of Brown-Séquard were, however, soon controverted by Phillipeaux[43] and by Harley,[44] who found that white rats survive the removal of the adrenals. These and other authors believed that the suprarenal capsules had no function to perform in post-uterine life and that death which sometimes followed removal of these glands was due to a stimulation of the adjoining nerves or to a peritoneal inflammation—that familiar interpretation which has obstructed the progress of many a discovery in physiology and medicine, and which was instrumental in postponing our knowledge of the significance of the suprarenal glands to life for nearly thirty years. After the revelations which came to light in the eighties

34. Sandstroem: Jahresb. f. Anat. u. Physiol. (Hoffmann and Schwalbe's), 1881.
35. Gley: Arch. de physiol. norm. et path., 1892.
36. Kohn, A.: Arch. f. mikroskop. Anat., Bd. 44, 1894.
37. Vassale and Generali: Arch. ital. de biol., xxv, xxvi.
38. Halsted: Jour. Exper. Med., xi.
39. Beebe: Proc. Soc. Exper. Biol. and Med., iv, 64.
40. MacCallum and Voegtlin: Bull. Johns Hopkins Hosp., March, 1908; Jour. Exper. Med., xi.
41. Erdheim: Mitt. a. d. Grenzgeb. d. Med. u. Chir., xvi.
42. Brown-Séquard: Compt. rend. Acad. d. Sc., 1886, xliii.
43. Phillipeaux: Compt. rend. Acad. d. Sc., xliii, xliv.
44. Harley: Med. Times and Gaz., 1857, p. 564.

regarding the importance of the thyroid glands, experiments on the suprarenal glands were taken up again by many observers. In the main the problem is now well settled; the suprarenal capsules are vital organs; after the removal of both organs from animals under most careful surgical precautions the animals die invariably at periods varying from a few hours to a few days. The most extensive and convincing series of experiments were carried out by Strehl and Weiss.[45] We know now also the reason why Phillipeaux and Harley could not confirm the observations of Brown-Séquard; the white rat possesses along its back inside the abdomen various accessory masses of cells similar to that of the suprarenal capsule. These accessory masses are apparently sufficient to keep up the function after the loss of the main bodies.

Many studies were also carried on with injections of extracts of the suprarenals; these injections failed to keep up the life of the animals deprived of these glands. Neither has grafting of the suprarenals proved so far a real success. The experiments with injections of suprarenal extracts, however, brought to light a great discovery. It is the now familiar fact of the various and profound physiologic effects which suprarenal extract is capable of exerting on the animal body. It ought to be stated that this discovery also came about through the initiative of a clinician. Dr. Oliver administered to patients by the mouth extracts of various organs and observed by the clinical instruments which he employed that they exerted a definite influence on the blood-vessels. After a consultation with Professor Schäfer they started a systematic investigation on animals which led to their great discovery of adrenin.[5] We need not discuss here the great importance which this extract has attained as a therapeutic agent in medicine and surgery; it is now common knowledge.

This active extract is obtained from the medullary portion of the adrenals, secreted apparently by its specific cells. By various reactions and methods this extract has been traced, step by step, on its way from the cells to the blood in the vein of that gland. The internal secretion of this gland seems thus to have been, so to say, directly demonstrated. The cells of the medullary portion of the adrenals are similar to those found in the carotid gland, in Zuckerkandl's gland and in some sympathetic ganglia. They all have in common an affinity for chromic acid—hence the name chromaffin cells—and exert a similar physiologic action, for instance, a rise of blood pressure. The medullary portion shows also embryologically a relationship to the sympathetic nervous system. It is assumed by some[46] that the action of adrenin (adrenalin) on organs which are innervated by the dorso-lumbal portion of the sympathetic nervous system is similar to that of the action of the corresponding sympathetic nerve fibers on smooth muscle.

Reports are gradually increasing, showing the relations of the conditions of the medullary portion of the gland to various pathologic and toxicologic states (chloroform poisoning, shock, nephritis, etc.). We shall not dwell here on these details. We are in the midst of a great chapter, and the future has yet a great deal in store for our knowledge. In fact, we know as yet nothing of the significance of the cortex of the gland. But we have certainly learned a great deal about that gland in a remarkably short time. We know now that it is an absolutely vital organ, that it exerts its physiologic influence by emptying its secretion directly into the blood, and we have learned to obtain from it an extract which is of immense practical and scientific importance. These important facts have been learned by animal experimentation, and we could never have learned them in any other way.

45. Strehl and Weiss: Arch. f. d. ges. Physiol. (Pflueger's lxxxiv, 107.
46. See Elliot: Jour. Physiol., xxxii.

HYPOPHYSIS

This gland is very small, weighs about half a gram, and is hidden away in a most inaccessible manner in the sella turcica. The older anatomists ascribed to it the fanciful function of secreting mucus, hence the term of pituitary gland. In more recent times—until 1886—it was looked on as an evolutionary remnant, a sort of useless appendix of the brain. It consists of two parts, a larger anterior part, containing glandular epithelial cells, and a posterior part, which contains some nervous elements and no epithelial cells. Since Rathke (1833) and Mihalkovits (1874) it has been generally recognized that both parts are embryonically developed from different origins; the anterior part coming from the posterior pharynx and the posterior part from the midbrain.

It was again clinical medicine which began to shed light on the function of the pituitary body. In 1886 P. Marie[47] called attention to the occurrence of a new disease which he termed acromegaly and which was found to be associated with tumors of the hypophysis. The most striking sign of this disease is the overgrowth of certain parts of the skeleton, especially the extremities and the lower jaw; hypertrophy of the connective tissue is also present. The statements of Marie were confirmed by many other observers. Furthermore, it was found that gigantism, that is, an increase of growth which leads to unusual stature, is in most cases associated with tumors of the pituitary body and a concomitant enlargement of the sella turcica. These clinical observations, which clearly indicated that the pituitary gland is in some way connected with the growth of the body and exerts, therefore, a physiologic function on the growing and grown-up animal organism, led to various series of experimentation, of which we shall mention here briefly only two. In the first place, the attempt was made to study the effect of the removal of the gland. Until a few years ago these attempts seemed to be futile, as the various investigators obtained contradictory results, which was not surprising considering the immense difficulties with which the experimenters were confronted in their attempt to reach that hidden gland without endangering the life of the animal. About three years ago, however, Paulesco[48] worked out an apparently satisfactory method of getting to the pituitary body through the temporal bone. The results, which were arrived at by Paulesco himself and which were extensively confirmed, among others by Harvey Cushing,[49] seem to be uniform and reliable. Briefly stated, they are as follows: Complete removal of the hypophysis leads invariably to the death of the animal within forty-eight hours after the operation. Reaching the gland and handling it has no effect. Neither does the complete removal of the posterior part seem to have any effect. On the other hand, the complete removal of the anterior part has the same invariably fatal effect as the complete removal of the entire gland. Leaving behind a small portion of the anterior part saves the animal's life. We thus have positive evidence that the hypophysis, like the thyroids, parathyroids and the suprarenal capsules, is an organ indispensable to the life and health of the animal.

47. Marie: Rev. de méd., 1886, p. 298.
48. Paulesco: Jour. de physiol., 1907, ix.
49. Cushing: THE JOURNAL A. M. A., 1909, liii, 249.

The second line of investigation, which was carried out by Schäfer[50] and his associates, by Howell[51] in this country, and by many other investigators, deals with the effects of injections of extracts of the pituitary body. The results as they stand to-day are as follows: The extracts cannot save the life of the animal after removal of the gland. Extracts made of the anterior part exert no definite influence on the animal. On the other hand, extracts made of the posterior part have a definite influence on blood-pressure and, independently of the blood-pressure, also on the urinary secretion. We need not enter here into the details of the nature of this influence, but it is in no way comparable with the marvelous influence of the extract made of the medullary portion of the adrenals. The striking outcome of these investigations for the present is that the part which is essential to life exerts no influence by its extract, and the part which exerts such an influence seems to be unessential to life. It is evident that the action of the normal organ is not identical with the action of its extracts—a lesson which is not yet well learned by some writers who deal with the significance of iodothyrin or adrenin.

With reference to the relation of tumors of the hypophysis to acromegaly and gigantism, we have at present still two contending theories. One assumes that the changes in the growth of the organism are due to a destruction or diminution of the function of the gland; the other theory assumes that the increase of growth is due to a greater stimulation of the function of the gland, assuming that the tumor, at least at its beginning, is of the nature of hyperplasia and benign in character.

As to the therapeutic application of these results, we have stated already that injection of the extract is of no avail in saving the life of the animal after the complete removal of the hypophysis. I am not aware of any attempts to graft this gland. But there is very promising beginning in the surgical treatment of the diseases due to the pathologic condition of the hypophysis. There are already on record a few successful cases of removal of tumors of the pituitary gland in which, of course, some fragments of the gland were purposely left behind. We are here only at the threshold of a new era.

Recently good results were also reported from treatment of shock, uterine hemorrhages, etc., by injection of extracts from the infundibular portion of the hypophysis.

THE THYMUS

It is true that this ductless gland gradually atrophies during extrauterine life, but it is also true that it persists for a long time after birth. With our present knowledge of the importance of the other ductless glands we are hardly justified in assuming that the thymus is a worthless fetal remnant. But we have to acknowledge that as yet there are no reliable observations or experiments which indicate clearly that the thymus has a function in postuterine life.

(To be continued)

Pemphigus.—There is need of further investigation of the entire group of pemphigus eruptions, along the lines of modern research; it is not sufficient to merely employ observation. The following studies should be made: 1. General metabolism. 2. Toxicity of sweat. 3. Bacteriologic examination of blood, bullas, urine, feces. 4. Agglutinating power of blood.—H. H. Hazen, in *Journal of Cutaneous Diseases.*

50. Schäfer: Croonian Lecture, Proc. Roy. Soc., London, 1909, lxxxi.

51 Howell: Jour. Exper. Med., 1898, iii.

BILHARZIASIS IN THE NEW WORLD*

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The building of the Panama Canal by the United States government has furnished an excellent opportunity for the exhaustive medical study of the surrounding races imported and engaged in its construction. A group of West Indian Islands, Central America, and the northern and western parts of South America, have been heavily drawn on for contract laborers. The systems of physical, clinical and pathologic diagnoses carried on in its great base hospitals at Colon, and especially at Ancon, have furnished the necessary data for the determination of almost every known tropical disease indigenous to these races. In this research of medicine the determination of the intestinal flora and parasitology has engaged by extended microscopic research its fair share of study in patients representative of a tropical section, and in no essential way do the results seem to differ from discoveries made in the tropics of the Old World.

Among these intestinal parasitic diseases uncinariasis (hookworm infection) has been far the most prevalent. Tricocephaliasis and ascariasis are very common. Amebiasis is frequent, but not so fatal as in the Philippines. The *Cercomonas intestinalis* (a ciliated monad) is very frequent; a few scattered cases of *Balentidium coli* have been found. The various forms of *Tænia*, the *Tænia saginata*, *Tænia solium* and *Bothriocephalus latus*, are well represented among the parasites of the Spanish laborers from the Mediterranean region.

The three first-mentioned diseases and amebiasis are already well known in the Southern states, where in North and South Carolina, eastern Tennessee and Georgia, and the entire fringe of gulf states, ankylostoma disease (hook-worm) is of comparatively common occurrence. Amebiasis is frequently observed in southern Louisiana and Texas, notably in New Orleans, Galveston and other gulf ports. Trichocephaliasis is not so frequently discovered, while the subject of this paper, bilharziasis, is unknown in the United States and until very recently even in America itself.

Stiles says that the human blood-fluke *Bilharzia* has been found but twice in America, once in a "Midway" patient in Chicago, during the world's fair, and once in New York City. Another case is recorded from Georgia (the patient a Boer), with evident infection outside of the United States. There is no evidence or report of cases showing that the disease has any foothold outside of the tropics, either in America or the Old World.

Among these interesting parasites discovered in the stool examination work on the isthmus most unexpectedly turns up the *Schistosoma hæmatobium*, *Bilharzia hæmatobium*, *Distoma hæmatobium*, the parasite of bilharzia disease, or the "disease of Egypt." Now rediscovered and destined to take its prominent place in the intestinal parasitology of the New World, until as late as 1904 its appearance in America was unknown. Scheube, in his "Diseases of Warm Countries," speaks of it as a disease only of the Old World, notably Egypt, where one-half the inhabitants suffer from it. Allbutt, in his "System of Medicine," says: "The distribution of bilharzia is Ethiopic." The "Encyclopedia of Medicine" and Buck's "Reference Hand-book of Medical Sciences" do not mention its appearance in the Americas. Manson, in "Tropical Medicine," fails to note its exist-

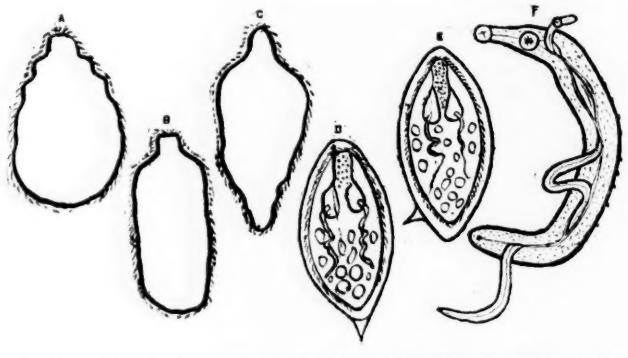
* Read before the Isthmian Canal Zone Medical Association, April, 1909.

ence in America until his latest book, in 1904. Jackson, in his work on tropical medicine, 1906, is the first author to note its comparative frequency on the American continent and its dependencies.

GEOGRAPHICAL DISTRIBUTION

Formerly supposed to be restricted exclusively in its habitat to Africa, where, as just stated, in Egypt it infects a majority of her people, and is found at one-third of all autopsies, it has spread to the natives and residents of the Uganda, Congo, Tunis, Abyssinia, Sudan, Natal and the interior. It is also found in Mecca, which, through the pilgrimages, is the distributing-point for Syria, Persia and Arabia. In India and China it is now known to have a foothold in the port cities, and the Philippines are not exempt. On the Isthmus of Panama, according to statistical records obtained from the Chief Sanitary Office, it has been reported 104 times, as follows: 3 times in 1904, 4 times in 1905, 9 times in 1906, 62 times in 1907, 19 times in 1908, and 7 times in 1909. These statistics are obtained from approximately 30,000 stool examinations.

Its geographical or racial frequency has been observed by me to be in the following order: First, the French group of islands lead; Guadaloupe and Martinique have



A, B, C, Bilharzia embryos, showing alterations in shape (after hatching) by which locomotion is accomplished; D, bilharzia ovum from urine, showing terminal arrangement of spine at posterior extremity; E, bilharzia ovum from feces, showing lateral arrangement of spine near posterior extremity; F, *Bilharzia hæmatobium* trematode, showing male and female worm and relation of sexes.

furnished the greatest proportion of all cases. Following these, Antigua, Trinidad, Demarara, Barbadoes and Jamaica, with least frequency in the two last islands. Dutch Guiana has also furnished one or two cases, and probably more would be found in the inhabitants of the three Guianas were it not for the small number of laborers hailing from that region. Porto Rico also furnishes an infecting center (report of B. K. Ashford).

The paucity of cases discovered and discoverable in America, compared with old-world frequency, gives rise to the inference that bilharzia was originally an old-world disease. It has been suggested that its origin on this continent was the importation of Hindoo laborers for work in English colonies in Trinidad and British Guiana. This may have been the deciding initial focus. Again, it is to be remembered that the negroes of the New World were originally imported from Africa.

If either view be accepted, the existence of the parasite in America has been of comparatively short duration—at the longest not over 200 years.

THE STRUCTURE AND LIFE-HISTORY OF THE HÆMATOBIUM

Unlike most trematodes, which are hermaphrodite, this is a two-sexed organism. Milk-white in appearance, round and pointed at both ends, it measures about 1 cm. in length—one-third of an inch. Both sexes are provided with suckers. The female is longer than the male. The anterior half is white in color, the posterior half is gray with brown longitudinal stripings, which indicate the position of the intestinal canals. The worm is hematophagous, and the intestine is frequently filled with blood, which accounts for its darker color posteriorly. The anterior part of the body of the male is tapered off and flattened, while the thick posterior part of the body has a cylindrical appearance with its edges curving inward toward the abdomen, whereby a groove or not quite closed tube—the canalis gynæcophorus—is formed, and which serves for the reception of the thin female worm. At the termination of this canal a sexual opening is situated in the male. The sexual fluid is discharged into the canal and taken up through the sheath of the female by imbibition. The back surface of the male is provided with small spinous papillæ, and by this means the males cling to the walls of the veins during their wanderings in search of a permanent place of residence, which they find mainly in the pelvis.

When young the sexes live apart; when mature the female enters the gynecophoric groove or canal of the male. Within this canal the female remains completely hidden at times. At other times, owing to its greater length, it protrudes, mainly the posterior extremity, from the gynecophoric groove.

The reproductive units are eggs, which have the form of a compressed spindle somewhat inflated in the middle. They are slightly yellowish in color and measure 0.16 cm. in length—about 1/200 of an inch. Compared with other ova they are about three times the length of the *Uncinaria,* twice the size of the *Ascaris,* and six times that of the *Trichocephalus dispar.* At the posterior pole one finds a short, irregular tip, a spine, which in the eggs discharged in urine is terminal. In those discharged from the intestines it is generally slightly lateral. Each egg contains a mature embryo, cylindrical in form with a conical anterior tip surrounded with numerous fine cilia. A rudimentary intestinal canal and the germ cells posterior are readily distinguished.

These embryos are easily hatched by placing the eggs in fresh water. In a variable length of time, usually of short duration, a hazy motion is exhibited at the anterior extremity of the egg. This is caused by the action of numerous cilia near the mouth. Rupture of the placenta and shell generally occurs near the middle and in a longitudinal direction. The theory has been advanced that the cause of hatching is the lessened specific gravity of the surrounding media, the urine and feces. The activity of the embryos is very great, and even under the microscope they remain alive for a considerable period of time. I have observed motility for at least six hours after hatching them. This movement of the cilia is not necessary for locomotion, as this is brought about by alteration of the body shape.

Fresh water seems to be essential for the birth and continued existence of the embryo, but beyond this fact in the life-history and cycle of the parasite we know little or nothing. What or where its special intermediary habitat is before re-entrance to the human host is entirely speculative and conjectural. The fact that it seems to live only in fresh water and for only two or three days would indicate, however, that this intermediate host is a mussel, snail, fish or fresh-water vegetable.

The life-history of the worm is a long one. Evidence of infection has presented itself in patients who have long resided away from the infecting area. In one case

in which the patient left his native country, Egypt, as a boy, the ova were still found nine years afterward in the last drops of his urine, although all signs of hematuria had stopped.

ETIOLOGY

Natives are known to be more often attacked than foreigners, males than females and country than city people. The manner of infection is conjectural. It is presumed that the parasite is taken into the stomach either with impure drinking-water or some mollusc, fish, or vegetable. This is the view of Bilharz. Others ascribe it to bathing. The greater frequency of it in males, those who work in water most, as farmers, fishers or gardeners, favors the idea that, like guinea-worm disease, it may be acquired by bathing or working in or with water; while its frequency in country people and its comparative rarity in cities like Cairo and Alexandria, which have a purification system for their water-supply, favors the belief that it is a water-borne disease. In Egypt one observer notes that it is commonest in the summer months after the overflow of the Nile, but others fail to corroborate this view. Its period of incubation in the human being appears to be short; and symptoms of the disease have appeared within four weeks of the possibility of infection.

HABITAT IN MAN AND PATHOLOGY

The portal vein is the principal habitat of the adult parasite, but the young worms are also found in the liver, in the intestinal veins, in the bladder walls, and pelvic blood-vessels of both sexes. In the lungs the blocking of blood-vessels from the ova and surrounding infiltrations give rise to deposits, which may be mistaken for tuberculous deposits. Cirrhosis of the liver and biliary calculi may be caused by the presence of the parasite. Serious disturbances arise from the attachment of the parasites to the walls of the urinary passage, or their adjacent organs. Dangerous hemorrhage may occur in the bladder, owing to irritation of the fluke or its terminal-pointed ova. Cystitis and urethritis are common complications and often the parasite is the starting-place of stone. Observation of one series of cases, that of Collordi in Egypt, demonstrated bilharzia as the starting-point in 80 per cent. of a series of cases of lithiasis. In the severer cases there may exist, with extension, the entire symptom-complex of "surgical kidney" or "surgical bladder." When the intestinal tract is involved, the symptoms resemble those of tropical dysentery. Several such cases have appeared in the wards of Ancon Hospital. In the severe cases nutrition suffers and the patient becomes run-down and cachectic. A patient recently admitted to Ward 20 beautifully illustrated the destructive tendencies of the disease. The following is a report of this case:

CASE 1.—The patient, W. H., chart No. 54215, black, an Antiguan, aged 35, was admitted into Ancon Hospital Feb. 10, 1909. He had a sharp attack of fever, headache and chills on admission, temperature 104, pulse 120, respirations 28, with tender spleen and liver, a badly coated tongue, and bronchitis. Glandular enlargement was general, and he had a chronic orchitis on the left side. The blood was negative for the malaria plasmodium, and all urine examinations were negative for bilharzia or evidence of nephritis. Stool examination showed numerous specimens of bilharzia, with lateral-spined ova, and a few of uncinaria. The clinical malaria yielded rapidly to appropriate medication—quinin grains 30 daily—but about the tenth day he developed some dysentery. Daily examinations of the stool showed the presence of pus, mucus, epithelial cells and large numbers of bilharzia. Under bismuth, dram doses three times daily the dysentery cleared up, and the patient left the hospital on March 4, three and one-half weeks after admission.

The patient complained that at least once a month he had attacks of dysentery and passed blood and mucus. He is still under observation for bilharziasis and is passing the ova in large numbers.

There is no doubt in my mind that this is one of the group of cases in which the trematode now under discussion plays an important part in provoking a recurrent dysentery, and thereby temporarily disables the individual.

Among other cases of bilharziasis admitted into Ancon may be cited the following:

CASE 2.—Patient 31185, A. S., was a Barbadian, aged 24; he was admitted to Ancon Hospital, Sept. 5, 1907, with the following history:

On the isthmus seven months, second time in the hospital; sick for four days with dysentery, passing mucus and blood, six or seven stools in the day, and the same at night; headache, fever, vomit and backache—malarial symptoms. Abdomen tender, not tympanitic; lungs, liver, spleen and heart, negative. Tongue coated; blood-vessels markedly sclerotic; urine with a trace of albumin and hyaline and granular casts, specific gravity, 1010. Temperature was 101.8; pulse 102.

Stool examination showed the presence of ascaris ova, bilharzia ova, blood, pus, and epithelium. Fever declined until the seventh day after admission, when it reached normal. The stool record showed nine stools the day of admission; fourteen the second day; eleven the third; ten the fourth; nine the fifth; ten the sixth; nine the seventh; five the eighth; three the ninth, and an average of two or three a day until the patient was discharged on the twenty-eighth day after admission. Milk diet, saline irrigations, twice daily, discontinued on the tenth day, and quinin grains 30 daily, with absolute rest in bed, was the line of treatment followed. A Widal test on the fifth day was negative. Recovery was uneventful, and the patient left the hospital on October 3, twenty-eight days after admission.

Interest in this case is of paramount importance, because of the fact that the bilharzia ova discovered in the stool were terminal-spined. This is the second case of which I have knowledge in which terminal-spined bilharzia ova have been found in the stool examinations of patients admitted into Ancon Hospital. The diagnosis in this case was corroborated by at least two other physicians working in the same laboratory at the same time—Dr. J. P. Bates and Dr. James Melton.

In order that no mistake might be made as to the source of the specimen, special arrangements were made to insure its accuracy of origin. The specimen of stool examined on September 7 was obtained after special instructions had been given the orderly to see that there should be no mixing of stool or urinary evacuations, with the result that on microscopic examination, terminal-spined bilharzia ova were again found in the stool. Further to exclude the probability of urinary contaminations, specimens of urine were obtained on September 5, 7, 13 and 16 and centrifuged, with the result that they were all negative for bilharzia ova. The extraordinary interest which attaches to this particular case rests on the fact that, according to the literature, terminal-spined bilharzia ova are found practically only in urine, and intestinal bilharzia are almost always lateral-spined. The "Reference Handbook of Medical Science" goes so far as to define the difference that urinary bilharzia ova always are terminal-spined, and intestinal bilharzia ova always lateral-spined. Manson does not agree with this, nor does the citation of the above case comport with the previous opinion.

Through the courtesy of Dr. John Lawler, of Ancon Hospital, I have the privilege of reporting another case which I studied carefully. The patient is an inmate of

the insane asylum, a female. Lateral-spined bilharzia ova have been found in the urine of this patient, as well as in the stool. As no fistula has been discovered between the urinary and intestinal tracts, it is a fair presumption that the ova by some mistake in their wanderings reached the urinary instead of the intestinal tract. Fecal matter is not passed in the urinary discharges.

As it is against precedent and the literature for us to believe that lateral-spined ova are normally passed into the bladder, it will take an internal examination to clear this pathologic mystery. The patient is tuberculous and her demise expected within a year; she will undoubtedly yield an interesting autopsy.

A study of her case evokes the interesting discussion concerning a duality of urinary and intestinal bilharziasis. Are there two distinct diseases caused by different trematodes? This is a much-mooted point by workers on this subject at the present time.

It is explained that the difference in the position of the spines is brought about by different mechanical conditions in which parental worms ovulate, or by differences of pressure in altering the position of the ovum in respect to the duct of the shell-gland. Manson questions the value, if any, of this mechanical theory, and boldly states his belief that difference of the eggs indicates difference of species. In furtherance of his view he recalls a recent discovery of an entirely different species found in Asia, the *Schistosoma cattoi*. This new fluke, like the more familiar *Bilharzia*, also infests the portal circulation, but, unlike *Bilharzia*, it lies on the arterial side of the circulation. Further, its eggs bear no spine at all, although, like the lateral-spined *Bilharzia*, they are always extruded into the bowel. In addition, its life-history is better known, and its discovery in the domestic animals, notably the cat, may give a further clew to the discovery of the life-history of its more dangerous rival, the *Hæmatobium*.

PROGNOSIS AND TREATMENT

As regards prognosis and treatment, the disease, though obdurate and relapsing, is generally not fatal. So far on the isthmus the discovery of the conditon has been mainly only an incident of routine stool examination, and it plays little or no rôle in the patient's appearance at the hospital. Its severity depends on the degree of infection. In cases of moderate intensity, appropriate treatment of a general character is sufficient to effect amelioration, and in many cases the disease is self-terminating. Anthelmintics and other medicaments of similar nature have no place in treatment.

In urinary bilharziasis the watchword should be to beware of surgical interference. An examination of the urine will quickly make the diagnosis, and the disease, except for grave complications, should be left alone.

In conclusion, we may note that the expansion of medical America toward the tropics has brought into prominence peculiar worm and parasitic bowel diseases of man. To an already long list of American parasites we may now add *Bilharzia*.

The study of a branch of medicine for long relegated to legends of ancient pathology and almost mythology with some nations will take a new impetus from the American exploitation of the tropics in Panama. And inasmuch as the increasing frequency of relationship between our own country and the South puts us under the obligation of acquiring some knowledge of an exotic pathology, in which parasitic diseases, especially of the bowel, play a prominent rôle, it is not amiss that careful study be devoted in America to this distasteful but essential branch of medical knowledge, and that all cases should be reported.

NOTE.—In the discussion of this paper, Dr. Henry Carter, director of hospitals on the Isthmus of Panama, reported a case of bilharziasis which he observed in San José General Hospital in Costa Rico. This case was attended with severe dysentery, and the ova on microscopic examination were especially numerous. Dr. Samuel T. Darling of Ancon Hospital also reported a case in a man who had but recently come from Brazil. Since the presentation of this paper I have had a case reported to me from Lima, Peru. This widespread distribution of bilharziasis in America indicates that it is another pandemic tropical disease, though fortunately at present it is of slight economic importance.

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GONORRHEA: PRIMARY FACIAL INFECTION WITH AXILLARY INVOLVEMENT

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An unusual and interesting case of gonorrhea involving the lymphatic glands surrounding the external iliac artery was reported in THE JOURNAL about four and a half years ago by Dr. J. A. Nydegger[1] of the U. S. Public Health and Marine Hospital Service; and last year Dr. E. F. Wright[2] reported a case of sycosis apparently of gonorrheal origin. The following case, while of itself interesting as a curiosity, acquires additional interest from the fact that it appears to fill in, more or less appropriately, the gap between the two above recorded observations. At the same time it seems to open up the question of the regions tributary to the axillary lymphatic glands. All medical science is built on the observations and deductions of cause and effect, and any link of evidence seeming to verify causal relationship is necessary to the chain. This is my excuse for reporting the following case.

History.—On Feb. 10, 1910, a man, aged 36, married, with two children, to my own knowledge of good habits and denying any previous gonorrheal infection, presented himself complaining of a swelling in the upper part of the axilla just posterior to the outer border of the pectoralis major. He had been seen by another physician not actively practicing, who had diagnosed the swelling as axillary abscess, and referred the patient to me to open it. The history was to the effect that it had been first observed six days before, when about the size of a marble, and (so the patient averred), soft.

Examination.—The swelling was about the size of a hen's egg, ovoid, resembling it in shape. There was no fluctuation, but rather a leathery tough feeling, with no redness or heat apparent. It was intensely tender and seemed adherent to the overlying skin in the central portions. The patient's temperature at the time I saw him (late afternoon) was 101.6, pulse about eighty. A blood examination showed hemoglobin and red cells practically normal, with a leucocytosis of 17,000; the differential count showed polynuclears 76 per cent., small mononuclears 8 per cent., large 14 per cent., eosinophils 2 per cent. The patient denied any history of injury to the arm or breast on the affected side, and the closest examination failed to reveal even the slightest scratch in the regions supposed to be tributary to the axillary lymphatic system. The only abnormalities that could be found were four small pimples; the lowest in the median line just below the chin, three-quarters of an inch above the upper border of the thyroid cartilage; two on the side of the face about an inch posterior to, and a little higher in level than, the angle of the mouth; and the fourth,

1. Nydegger, James A.: An Unusual Gonorrheal Complication, THE JOURNAL A. M. A., Sept. 23, 1905, xlv, 920.
2. Wright, Edward F.: A Case of Sycosis, Probably Due to the Gonococcus, THE JOURNAL A. M. A., June 19, 1909, lii, 1996.

almost entirely healed, in the temporal region at the hair margin. All were on the same right side of the body as the affected gland. A little pus could be squeezed out from the three lowest; smears were made and all were cleaned out with phenol. Looking again more carefully at the axillary swelling, I felt convinced that pus was present, and incised quite deeply into the center of the swelling. No pus was found, and it was not considered advisable under existing circumstances to undertake any extensive dissection of the axilla in the search for it, the patient's financial status being such as to preclude removal to a hospital until it was more certainly demanded. The incision cut through a mass of swollen and apparently hypertrophied cutaneous tissue, and the appearance given was such that one was inclined to doubt if any pus was present deeper, whether one had not rather to deal with a cellulitis.

Course of Disease.—I was loath to relinquish the idea of pus, and for five days hot antiseptic poultices were constantly applied, the incision was kept open and considerable serum drained therefrom. During this period the patient was seen twice daily, and remained in about the same general condition. The morning temperature would be normal, the evening rising to 100.5 or 101.8 the highest observed. The tumor in the axilla grew slowly and steadily circumferentially; but, possibly by contrast with its increased area, seemed flatter. It was, however, much less tender, and could be grasped between the thumb and four fingers much as one could grasp the detached heel of a slipper, which it much resembled in size, thickness and leathery consistency. In the meantime the bacteriologic examination of the material squeezed from the pimples had shown the presence of a mixed infection of staphylococci and diplococci, chiefly intracellular, which further examination showed to be gonococci. Working on this clew we got from the patient a more complete history, to the effect that he had not used any towels but his own for some months past; that he always shaved himself; had not lent his razor to another, or used any but his own. Under still more careful questioning he remembered that he had noticed the first pimple, that highest on the forehead, just about a week after having his hair cut in a certain barber-shop, and that at that time he had had a scratch on the head in that region. The lower pimples had appeared consecutively in the order of their arrangement from above downward. These data took some time to acquire; during the interval blood examinations were made daily. The leucocytosis remained almost stationary, falling a little. On the fifth day, the incision was slightly enlarged without result so far as finding pus was concerned, and a dry cup was applied for possibly one hour. The wound was dressed and the patient sent home. At the next visit he reported that the dressing felt wet, and he was of the opinion that something had broken. The wound was found to be exuding a considerable amount, possibly a tablespoonful, of thick yellowish pus. The wound was again cupped, irrigated and under appropriate antiseptic treatment made an uneventful recovery. The pus obtained showed on bacteriologic examination abundant gonococci.

I am indebted to Dr. E. C. Gilbert, of Santa Barbara, who saw the case with me and followed it throughout, for much help in arriving at an accurate diagnosis and in searching the literature; also to Dr. E. L. Leonard and Dr. L. B. Stookey of the Pathological Laboratory of the City of Los Angeles for independently confirming the bacteriologic findings.

About a year previously I saw a somewhat similar case in the person of a boy presenting himself with a leathery swelling of the whole lower lip which had started from a pimple just below one corner of the mouth, the pus having spread and tunneled across the lip to the opposite corner. Here again the offending organism was the gonococcus, and working on this clue the infection was traced to a camp towel used also by a boy suffering from urethral discharge, presumptively gonorrheal.

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A FIRM BANDAGE

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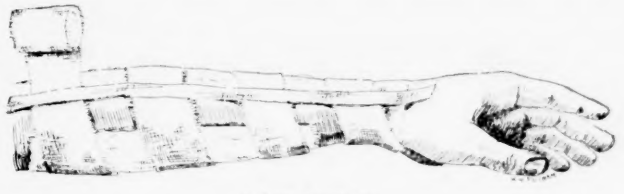
AURORA, ILL.

We all have our troubles attempting to fix a bandage on the limb or body of a patient who is not disabled for work and who is engaged in active labor; this is especially difficult in case of the forearm, elbow, calf, knee and thigh. We all have tried fixing the completed bandage with adhesive strips or safety-pins, but, in spite of these, we are generally dismayed to see the condition of the bandage when the patient returns to our office for redressing of the parts afflicted. The bandages do not hold because they have no firm foundation on which to hold; they slip and slide with the motion of the body until they become loosened and untidy. Working on this hypothesis, I have devised a method of applying a bandage in these cases, which I have found efficient.

Take, for example, a burn on the ventral surface of the forearm. Cover the wound with the proper dressing, fix a 1½-inch roller bandage with three turns at the



A firm bandage.

wrist; make turns of the roller until the elbow is reached, leaving about a 1-inch space between each turn. Take three adhesive strips ½ inch wide and long enough to extend 1 inch beyond the approximal and distal turns of the bandage, and apply them over the bandage and arm on the lateral and dorsal regions of the forearm, parallel to the long axis and extending onto the hand and about the elbow-joint. Now return to the wrist with a few turns of the roller and finish the bandage as a reverse spiral and fix with a pin or tie. Carrying out this idea of making a fixed foundation, very substantial bandages can be applied to almost any region of the body.

A NEW MODE OF FORMATION OF BETA OXYBUTYRIC ACID IN THE ANIMAL ORGANISM *

H. D. DAKIN
NEW YORK

Beta-oxybutyric acid is very generally believed to be formed in the animal organism by the oxidation of butyric acid and normally undergoes further oxidation with production of aceto-acetic acid, which in part loses carbon dioxid with formation of acetone. The changes may be represented as follows:

$$\underset{\text{(butyric acid)}}{CH_3.CH_2.CH_2.COOH} \rightarrow \underset{\text{(beta-oxybutyric acid)}}{CH_3.CH(OH).CH_2.COOH} \rightarrow$$

$$\underset{\text{(aceto-acetic acid)}}{CH_3.CO.CH_2.COOH} \rightarrow \underset{\text{(acetone)}}{CH_3.CO.CH_3} + CO_2$$

The oxidation of beta-oxybutyric acid to aceto-acetic acid has been shown[1] to be effected by an enzyme present in the liver which may be roughly purified and whose action is accelerated by the addition of oxyhemoglobin. The object of the following note is to record

* From the Laboratory of Dr. C. A. Herter, New York.

1. Wakeman and Dakin: The Decomposition of Beta-oxybutyric Acid and Aceto-acetic Acid by Enzymes of the Liver, Jour. Biol. Chem., 1909, vi, 373.

the results of experiments showing that the reverse change, namely, the reduction of aceto-acetic acid to beta-oxybutyric acid also occurs in the animal organism.

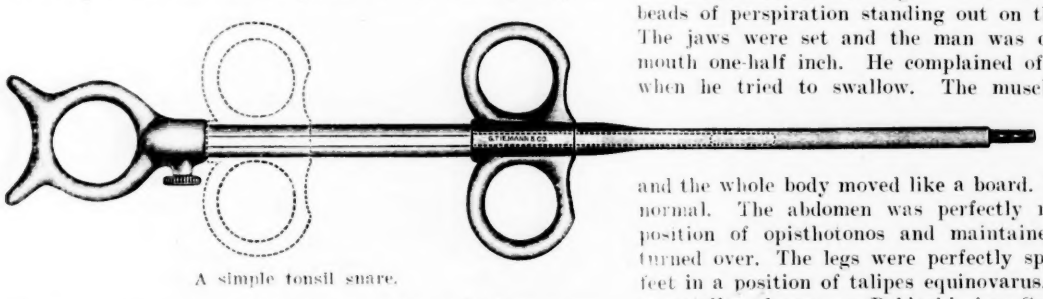
Sodium aceto-acetate prepared by the saponification of aceto-acetic ester with caustic soda was injected intravenously into cats and small dogs. In experiments in which a quantity of about 10 gm. of aceto-acetic acid in the form of its sodium salt (8 per cent. solution) was injected intravenously in the course of four to six hours, the urine secreted during this period was found to contain over 1 gram of levo beta-oxybutyric acid. Beta-oxybutyric acid was extracted with ether and identified by its levo-rotation, by its conversion into crotonic acid, melting point 73° C. and by its oxidation to acetone with chromic acid.

It is clear, therefore, that beta-oxybutyric acid and aceto-acetic acid are mutually interconvertible in the animal organism according to whether oxidation or reduction takes place. Since beta-oxybutyric acid, when present in the urine of diabetics, is almost invariably accompanied by aceto-acetic acid, it is possible that some part of the former acid may be derived by the reduction of aceto-acetic acid. An attempt will be made to investigate this question experimentally. It is possible that the reduction of aceto-acetic acid to beta-oxybutyric acid may represent a step in the hitherto unknown series of reducing reactions which must be associated with the synthesis of fat from simpler substances.

A SIMPLE TONSIL SNARE

CURTIS C. EVES, M.D.
PHILADELPHIA

In constructing the instrument shown in the accompanying illustration it was my desire to produce a tonsil snare simple in construction yet efficient in every way.



A simple tonsil snare.

The snare is composed of three parts: a hollow seamless steel canula of two sizes; the upper larger size has two bilateral slits extending the whole length to allow the second piece, the finger holds, attachment to the wire-carrier which slides easily through the smaller size of the canula. The holes in the end of the wire-carrier are made conoidal in shape, thus preventing any slipping of the wire. The third piece fits like a cap over the large end of the canula, and has provision for the reception of both thumbs; it is held in place by a small thumb screw. By loosening this screw, the snare is easily taken apart, in three pieces, for cleaning.

The snare has no screw or ratchet apparatus; the necessity for these is done away with in the construction by the size of the canula, the style of grip and the centric pull.

In a series of over five hundred pairs of tonsils removed from adults and children, which were dissected free from adhesions, the snare proved satisfactory in every case. By grasping the instrument with the first two fingers and the thumb of the right hand, the operator has perfect control of the wire loop, which can be accurately adjusted and tightened in place by shortening the grip of the right hand. The left hand can grasp the snare in a similar manner to that of the right, with the fingers in the concavities below the rings and the thumb in the concavity above the end ring.

By firmly tightening the grip of both hands the tonsil is easily removed.

1834 Pine Street.

HYSTERICAL TETANUS

DAVID B. ROBINSON, M.D.
KANSAS CITY, MO.

The following case may prove of interest since it shows hysteria in one of its most unusual and interesting phases.

Patient.—C. M., male, aged about 40, was admitted to the wards of the Philadelphia General Hospital suffering from what was suspected to be tetanus. The nearness to the Fourth of July, together with the clinical aspect and examination of the case all helped strengthen this diagnosis.

Condition on Admission to Hospital.—On admission, July 11, 1909, the patient complained of inability to open the mouth, with rigidity of the muscles of the neck, back, legs and abdomen. No wound was demonstrable on any part of the body. Temperature was 101 F., pulse 96, and respiration 24.

History.—Family and previous history were negative. He stated that he had used alcohol and tobacco to excess all his life. He was drunk on the Fourth of July and slept in a stable that night. The following morning his throat felt sore and he had some pain in the abdomen. On the next day his jaw became stiff and later the muscles of his back, abdomen and legs. The next day he was unable to walk and had to go to bed. He had great difficulty in swallowing. He was markedly constipated.

Physical Examination.—The patient was well-developed and well-nourished. All the muscles of the body except the arm and facial muscles were rigid. The skin was very moist, large beads of perspiration standing out on the forehead and neck. The jaws were set and the man was only able to open his mouth one-half inch. He complained of a great deal of pain when he tried to swallow. The muscles of the neck were spastic. He could be picked up by the back of the head and the whole body moved like a board. Heart and lungs were normal. The abdomen was perfectly rigid. He lay in the position of opisthotonos and maintained this rigidity when turned over. The legs were perfectly spastic, and he held his feet in a position of talipes equinovarus. There was no ankle or patellar clonus; no Babinski sign. Sensation to touch, pain and temperature was normal all over body. There was incontinence of urine.

Treatment.—The patient was at once given 30 c.c. of antitetanic serum and 20 c.c. repeated for several doses with no apparent change for the better. On the second day, the actual cautery, with suggestion, was tried, with decided change in the patient's condition. This treatment was continued for three or four days with such good results that the spasticity almost entirely disappeared and the patient could move about at will. In five days he was discharged, walking from the hospital and eating in a normal manner.

The locking of the jaw, the extreme rigidity of the trunk and legs with opisthotonos, extreme constipation, characteristic temperature and pulse with clammy skin and profuse perspiration all go to make up the symptom-complex of tetanus, the convulsions alone being absent. That the patient responded so promptly to suggestion through the medium of the actual cautery is very interesting.

603 Bryant Building.

A CASE OF SPLENOMYELOGENOUS LEUCEMIA IN AN IGORROTE

F. W. VINCENT, M.D.

Medical Inspector, Bureau of Health for the Philippine Islands; Acting Chief, Baguio Hospital.

BAGUIO, BENGUET, MOUNTAIN PROVINCE, PHILIPPINE ISLANDS

I report the following case to call attention to the presence of a comparatively rare disease in an uncivilized race in a remote corner of the globe; and to emphasize the value of careful routine examination over snap diagnoses.

Baguio is situated up in the Benguet mountains of the Island of Luzon. This country is inhabited by the wild mountain tribes who, until the advent of the Americans, seldom saw a white man. Moreover there was little, if any, mingling with the more civilized Christian tribes inhabiting the lowlands. Only during the past five years has the famous Benguet road made this region more accessible and brought representatives of other nationalities into closer contact with the Igorrotes.

Patient.—An Igorrote, aged about 40 (they never know how old they are), presented himself at the hospital clinic complaining of a large mass in his abdomen. Little history could be obtained, but the superintendent stated that the patient had been coming to the hospital off and on for over two years, and that the tumor had gradually increased in size.

Examination.—This revealed a bulging abdomen, the bulging being more marked on the left side, and due apparently to a splenic tumor occupying the greater part of the left side of the abdominal cavity, and extending 4 cm. to the right of median line, in the umbilical region. The tumor was hard and nonsensitive to pressure. The patient showed considerable anemia and emaciation.

Blood Examination: Unfortunately a complete blood count was not made at this time, but a stained smear was examined and the following note recorded: Red blood cells show moderate poikilocytosis, and a few nucleated reds, chiefly megaloblasts. White blood cells are enormously increased in number, and show a preponderance of neutrophilic myelocytes, large numbers of polymorphonuclear leucocytes, many large mononuclears, many mast-cells, and a few eosinophils—clearly the picture of splenomyelogenous leucemia.

After three months the patient had not appeared again at the clinic, so that no further observations have been made.

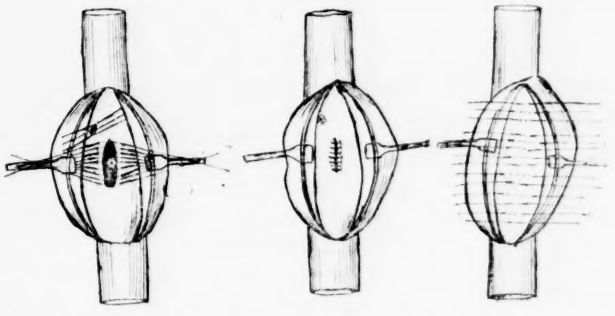
The superintendent states that during the previous two years this patient had been examined by other physicians who had diagnosed the case as malarial splenomegaly and prescribed quinin and ergot. If a blood examination had been made, the diagnosis could undoubtedly have been established long before, but because malaria is such a common tropical disease, it is very easy for physicians to make a snap diagnosis instead of taking the time for a blood examination.

ENDO-ANEURISMORRHAPHY OF POPLITEAL RESTORATIVE TYPE*

A. P. CRAIN, M.D.
SHREVEPORT, LA.

Patient.—J. L., a middle aged colored man, came to my ward in the Shreveport Charity Hospital with a non-pulsating tumor in the popliteal region said to have been caused by traumatism, a hand-car having run over the leg six or eight months previous. The patient also gave syphilitic history with well-defined signs. Although aneurism was suspected, a positive diagnosis was not made, as pulsation was inappreciable, bruit absent on account of blood-clots and *x*-ray failing to reveal anything of a positive character. The patient was, however, prepared for this operation.

Operation.—After the circulation was cut off, an incision was made over the tumor in the long axis of the limb. On entering the sac a fairly well-organized clot, almost filling the cavity but not completely stopping the circulation, was removed, and a hole the size of a dime was found opening into the main channel of the artery, through which the little finger could be passed and pushed to some little distance. Nature was beginning to show her wonderful curative power and no doubt would have accomplished the result later on. Since the wall of the artery appeared to be in very good condition I decided to try the restorative type, knowing that should I fail I could then do the obliterative and accomplish a cure. After



Endo-aneurismorrhaphy of popliteal restorative type: A, aneurism with collateral opening (a) and opening into main vessel (b); sutures untied; B, openings closed and sutures tied; C, tiers of Lembert sutures placed one above the other closing sac. First row is put in the length of the sac and tied, a fraction of an inch above this row another is placed, and so on, until the sac is closed. The skin is then sutured over this. All sutures used were Lembert's (interrupted reinforced by a row of continuous sutures).

cleansing the wound thoroughly of clots I closed the orifice as well as two collateral openings with interrupted Lembert sutures of chromic catgut No. 2; I also reinforced this with a continuous stitch of the same material. The tourniquet was then taken off and the wound tested for leakage. After a few minutes I noticed a little oozing and I again reinforced this by another fold and row of sutures which succeeded in keeping it absolutely dry.

In the closure of sac, I deviated a little from Dr. Matas' original method simply to see whether a little original idea of my own would work or not. Instead of enfolding the sac as Dr. Matas does, I simply used a row of interrupted Lembert sutures on one side near the bottom, taking in the floor of the sac and coming out of the other side at the same point at which I started. This row of Lembert sutures was made in the long axis of the tumor. Now a fraction of an inch above this I made another row of Lembert sutures like the first, and still another, and so on until the sac was closed; I then whip-stitched the edges together with catgut and sutured the skin over this with silkworm gut; no drainage.

Postoperative History.—The leg was put up in an extension splint for ten or twelve days, at the end of which time stitches were removed and, save one small stitch abscess, the patient made a splendid recovery. The dead space of the sac was entirely obliterated and after the patient had been kept under observation for one month he was discharged as cured. I instructed him to report to me should he experience any trouble; and since it has been about six or eight months I take it that he is all right.

I do not consider this method of closure of the sac any better than Dr. Matas' as far as results are concerned, but it is much simpler and easier to do and an experiment that worked well.

CONCLUSIONS

These crude drawings accompanying this article were copied from Bickham's "Operative Surgery;" they are

* Read before the Surgical Section of the Southern Medical Association, Nov. 9-11, 1909, at New Orleans, La.

Dr. Matas' original drawings. Any type of this operation endo-aneurismorrhaphy offers the following advantages.

1. Union takes place between the serous surfaces lining the sac (the arteries being mesoblastic).

2. The sutures take good and strong hold in the walls of the arteries.

3. The technic is simpler; there is less traumatism in elimination of any ligature and no disturbances of sutures in vicinity of aneurismal sac; collateral circulation is preserved and circulation of main artery preserved in favorable cases; usually there is prompt healing by approximation of skin to floor of sac.

4. According to my experience in this case any method which will obliterate the dead space will do to close the sac, since the success of the operation depends on thoroughly closing the openings and colaterals.

5. Excessive sac walls may be cut away to a certain extent so as to facilitate matters and to keep the wounds from appearing too bulky.

206 Continental Bank Bldg.

Therapeutics

EPISTAXIS

Hemorrhage from the nasal passages, nosebleed, may be of all grades, from the most trivial to the most dangerous. It may consist of only a few drops of blood, and may cease spontaneously, or it may be so abundant and so rapid as to imperil life, or even to result in death.

In most cases, the hemorrhage is caused by some local lesion in the nose, but in some cases it is due to a general disturbance of nutrition, or to disease of some other organ. In a few cases an abnormal general condition and a local lesion may each have a share in producing the hemorrhage.

Epistaxis may occur in the course of the acute infectious diseases, often in the early stage of typhoid fever, in diphtheria, measles and the other exanthemata, malarial diseases, and influenza; in the chronic infections, such as tuberculosis and syphilis, especially when ulcerative processes are localized in the nose. It may also occur in general diseases characterized by deterioration of the blood, such as hemophilia, purpura hemorrhagica, or the hemorrhagic diathesis, anemia, chlorosis, pernicious anemia, leucemia, scurvy, and jaundice; in diseases characterized by high blood-pressure, such as arteriosclerosis, chronic interstitial nephritis, and hypertrophy of the left side of the heart; and in diseases accompanied by venous stasis, because of the difficulty of the return of blood to the right heart as occurrs in cardiac disease with failure of compensation, some forms of nephritis, and hepatic disease, especially cirrhosis. Finally it occurs, though rarely, as a vicarious discharge to take the place of suppressed menstruation.

Among the local conditions the most common is ulceration of the mucous membrane of the nasal passages. These ulcers are often due to chronic nasal catarrh, and are usually situated on the cartilage of the septum at its anterior and inferior part.

Although there may be bleeding from any part of the nostrils, the vast majority, perhaps as much as 90 per cent., of all bleeding comes from the mucous membrane of the anterior part of the septum. Sharp, bony outgrowths from the septum and from the turbinates may cause ulceration and consequent bleeding. Adenoids are probably rarely the cause of epistaxis. Syphilis may cause bone ulceration and bone necrosis and be the cause of an epistaxis. Rhinoliths, or nasal concretions, are a rare cause of nasal hemorrhage.

Traumatism is, of course, a frequent cause of hemorrhage, especially fracture of the nasal bones and consequent laceration of the nasal mucous membrane. There may, of course, be hemorrhage from the nostrils in fracture of the base of the skull. Abrasions of the mucous membrane often occur from picking the nose, or from accidental or intentional introduction of foreign bodies into the nostrils.

Polypoid growths are frequent in the nose and tend to recur, and often cause bleeding, especially when connected with the septum. Various other growths, both benign and malignant, can occur in nostrils and may be the cause of hemorrhage.

The *New York Medical Journal*, August 28 and September 4 and 11, 1909, published a series of papers on the treatment of epistaxis. The composite advice of these writers is contained in the following recommendations.

When called to treat a patient who has nosebleed the first thing to do is to try to stop the bleeding; the details of the history of the case may be elicited later.

One writer (Henry I. Berger, Indianapolis), insists that the physician should not become excited, and that he should gain the confidence of the patient and the friends. Another recommends that the onlookers who are not actually engaged in assisting in the treatment should be induced to leave the room.

If the patient is walking about, frequently blowing his nose and wiping it to see if the bleeding has stopped, he should be made to sit in a chair with his head inclined forward, so as to diminish the tendency of the blood to flow backward into the pharynx, and also to encourage the blood to collect and clot in the posterior part of the nose. By carefully wiping the blood from the anterior openings of the nose, it should next be determined in which nostril the bleeding is taking place, as it does not usually occur in both at the same time.

Having determined in which nostril the blood is escaping, and remembering that the bleeding point is usually on the anterior and inferior part of the septum, remembering also that pressure on the bleeding point is the most efficient way of checking hemorrhage, the physician should press the ala of the bleeding nostril firmly and continuously against the opposed side of the septum. At the same time cold applications may be made to the nose and back of the head and neck.

While the physician is employing this maneuvre, and waiting to see whether it proves effective, he has a chance to consider whether it is really desirable to stop the hemorrhage, or whether it would be better for the patient to allow it to continue.

This point is discussed by Dr. W. A. Wallace, of Spartanburg, S. C., who says: "We base our treatment primarily on the existing blood pressure. When the nosebleed is present with a blood pressure at or below 160 mm. we are at liberty to use measures to stop the hemorrhage. If the blood pressure is above 160 mm. we must use general treatment, for in these cases local treatment is contraindicated."

"In cases of the second class, that is, those cases of epistaxis in which there is blood pressure of 160 mm. or more, we are not permitted to use local treatment, because the nose-bleed is simply Nature's safety valve acting to prevent a cerebral hemorrhage. In these cases

our aim should be to assist Nature in relieving the high pulse tension; and in the majority of cases venesection is indicated, especially so when we have indications of an impending cerebral hemorrhage, such as dizziness, headache, and distended temporal veins. In the less severe cases we may use an ice cap to the head, and at the same time the hot mustard foot bath. Morphin, gr. 1/8, subcutaneously, is, as a rule, required to quiet the patient. There are three important points which should always be borne in mind in treating epistaxis accompanying high blood pressure. First, do not attempt to check the hemorrhage with local applications to the nose. Second, always treat the kidneys on account of the existing nephritis. Third, use an eliminative treatment, such as saline cathartics, to remove the nitrogenous retention that is causing the high blood pressure and resulting in epistaxis."

In the absence of a blood-pressure apparatus, the physician must, by such examination as he is able to make, without an exact determination of the blood pressure, and by inquiries in regard to the way in which the different organs are performing their functions, decide whether it is better to check the hemorrhage at once or to allow it to continue for a time.

If it is determined to stop it, and the pressure of the ala nasi against the septum does not affect this result, then the blood and clots should be removed, and the interior of the nose carefully examined by means of a speculum and reflected light from a head mirror, or by direct illumination with electric light, if either are at hand, in order, if possible, to discover the exact site of the hemorrhage.

The bleeding nostril may be cleansed in several different ways. Some prefer pledgets of absorbent cotton wound on small pieces of wood, or on wooden toothpicks, and held in forceps. The cotton may be used dry, or moistened with an antiseptic or astringent solution. Others prefer to cleanse the blood from the nostril by using a syringe with hot saline solution or diluted solution of peroxid of hydrogen.

Having determined the exact situation from which the bleeding takes place, there is opportunity for a choice of any one of many local applicants. If the bleeding surface is of limited area, as for example an ulcer, the actual cautery may be applied, but care must be exercised that it be kept at a cherry red heat. Chromic acid, trichloracetic acid, and nitrate of silver are recommended by some. The local application of Monsel's solution, Liquor ferri subsulphatis, is recommended, and is often efficient, but is probably justly condemned by others. A 5 per cent. solution of nitrate of silver is sometimes useful. The official solution of hydrogen dioxid and solutions of suprarenal preparations are often effective.

If the bleeding area cannot be definitely found, or if the preparations applied do not stop the bleeding, resort must be had to the use of tampons. Here again there is a wide range for choice of individual methods. In many cases tamponing from the front of the nose will prove effective. For this narrow strips of sterile gauze may be used, to which a string is attached to facilitate their removal, or the so-called Bernay's sponge may be employed. This is inserted into the nostril while dry and then moistened so that it swells up and exerts pressure. The strips of gauze may be moistened with sterile saline solution, or suprarenal solution. The nose should be packed full so as to get the effect of pressure. The gauze also encourages clotting of the blood.

Some use styptic cotton, but this is not very satisfactory and has some objectionable features.

Dr. Albert L. Hall, of Fulton, N. Y., has had gratifying results from the use of puff ball in the nasal passages. It often stops the hemorrhage, and can be removed by means of the syringe with very little danger of starting up the hemorrhage. This is something which must always be guarded against when once the hemorrhage has stopped. Too great curiosity to learn the exact condition of affairs within the nose not infrequently results in the recurrence of a hemorrhage which was stopped only with great difficulty.

In the meantime, if the bleeding is severe, the limbs may be constricted close to the body, so as to retain as much blood as possible in them, and so diminish the pressure and the amount of blood in the nasal vessels.

If this tamponing from the front of the nose proves ineffective it is necessary to resort to the application of a tampon in the posterior nares. The traditional way of accomplishing this is with the aid of a Belloc's sound. If this instrument is not at hand, a soft urethral catheter, to the eye of which a heavy silk ligature if fastened, may be substituted for it. This is passed along the floor of the nose, until it can be seen in the pharynx below the soft palate. It is then grasped with a pair of long forceps, and drawn into the mouth. Securing the ligature, the catheter is withdrawn through the nose leaving the ligature with one end hanging from the nose and the other from the mouth. It is wise to have this ligature double, so that if for any reason one is inadequate, the other can be used. One of these ligatures is tied, a distance of eight or ten inches from its end, to a roll of gauze or absorbent cotton large enough to fill up the posterior entrance to the nasal passage, some say "as large as a walnut"; others, "one and a half by one inch in size." By the aid of the ligature this is drawn back through the mouth and up against the posterior entrance to the nose, the adjustment being aided by the finger of the physician passed through the mouth and back of the soft palate. After this is snugly in place the anterior part of the nose should be packed from the front.

If skilfully done, this will stop the hemorrhage. The next question which arises is how long shall these tampons be allowed to remain in the nose. All agree that they should not be allowed to remain more than three days, and most advise their removal after one day. If they are left in the nose too long, there is danger that infection will be set up in the nose or the accessory sinuses. The removal must be done with great care, for there is danger that the hemorrhage will recur, and it may become so severe as to necessitate another application of the tampons after thorough cleansing of the nasal passages with an antiseptic solution.

If the patient is very nervous and restless, a hypodermic injection of one-eighth of a grain of sulphate of morphin is often of advantage.

When the hemorrhage tends to recur, and there is low blood pressure, when there is cardiac debility, and especially when there is lack of good compensation in valvular disease, digitalis or strychnin, or both, are valuable aids in preventing hemorrhage.

The after-treatment of these patients must never be neglected. Any local cause for the hemorrhage—an ulcer, dilated veins, hypertrophied turbinates, bleeding polyps, etc.—should be carefully treated and removed if possible. Any disturbance of the other organs of the body should be investigated and relieved.

Often the loss of blood, and in some instances predisposing conditions in the blood, furnish a strong indication for administration of iron and other tonics.

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[*For other information see second page following reading matter*]

SATURDAY, APRIL 30, 1910

THE GENERAL PRACTITIONER, THE SPECIALIST AND THE PUBLIC

That there is a tendency among the members of the profession studying and practicing different branches of the science and art of medicine to drift apart and to lose sympathy with each other is a matter of frequent observation. The exclusive reliance of the specialist on the journals devoted to his special subject, which the general practitioner does not read, has contributed not a little to this lack of sympathy among the members of the profession. The laboratory man, the experimenter, wrapped up in the problems which he is attempting to solve, fails to keep in touch with the rest of the profession. The surgeon is apt to feel that the practice of medicine is subsidiary to his art. The men practicing the various specialties are each prone to believe that his branch is the pivot about which the practice of medicine revolves. The general practitioner feels little interest in any of them. It is only when some epoch-making discovery or procedure crystallizes the efforts, perhaps, of numerous workers applying themselves over a long period of time that the average practitioner realizes the value of the laboratory investigator's efforts and their application to his work. The surgeon and the men practicing the allied special branches come more in contact with the general practitioner, but often the latter looks on his specializing colleagues as necessary evils—necessary because he must refer to them the cases beyond his skill. Taking the material view of it, he feels that for a very brief service they exact an honorarium for which he would have to labor long and hard. When they attend society meetings he finds that they read long-winded papers on technical subjects in which he has no particular interest or which he does not understand, or they seek to magnify the importance of their particular specialties.

As a matter of fact, the general practitioner and the specialist need each other, and the best interests of medicine are served when they all meet and freely exchange views on their daily work and discuss subjects of interest to the whole profession. The researchers should show themselves frequently at medical meetings and tell the general profession what they are trying to accomplish and how they are endeavoring to do it. The supposed mystery and the difficulties of their work will be cleared up to the general profession, and in many instances, no doubt, the experience of the general practitioner will give the investigator exactly the clue needed to solve the problems on which he is working.

The men of greater opportunities, whether surgeons, internists or specialists, should go more frequently to the state, district and county societies. They should get off their scientific high horses and talk more about the little things of their work—the things that touch the general practitioner in his daily practice—and not always about the big operations, or the procedures and technic to be employed in the difficult and the rare cases. By works and words the specialists should seek to avoid creating the impression which sometimes prevails that when they go to medical meetings it is for the purpose of furthering their personal interests along the line of their specialties. They should all take more interest in medical-political affairs and the common interests of the profession. The claims of the larger affairs of public hygiene and health are becoming daily more insistent and demand the aid of the leaders of thought in the profession, and, indeed, of the whole profession.

This is one of the large and important fields in which the activities of the profession in future are to be exercised. A bill recently introduced in Congress to create a department of public health with a portfolio in the cabinet shows the importance which these matters are assuming in the public mind. There are other important public matters of a medical nature still demanding the attention of the profession, such as medical education and legislation and the protection of the public from medical frauds. All these questions, for their best solution, require a united profession, cooperating in closest harmony along all the lines of scientific, professional and political-medical endeavor.

LIGHT ON SHAKESPEARE'S MEDICAL INFORMATION

One of the most interesting features of Shakespeare's plays is the amount and variety of information with regard to medicine in his time which they contain. Shakespeare evidently knew the names and uses of many drugs. He mentions aconitum, ginger, camomile, the mints, savory, marjoram, the worts, wormwood and many others. He speaks of "potions of eysell" or vinegar given to ward off infection.[1] In "Othello" he mentions two hypnotic drugs;[2] and in "Romeo and Juliet" the use of the sleeping-potion suggests anesthesia.[3]

Of course, one need not accept the conclusion of some bewildered commentators, who rashly infer that Shakespeare must have been a physician, or at least a medical student. It should be remembered that an

1. Whilst, like a willing patient, I will drink
Potions of eysell, 'gainst my strong infection.
Sonnet 111.
2. Not poppy nor mandragora
Nor all the drowsy syrups of the world
Shall ever medicine thee to that sweet sleep
Which thou ow'dst yesterday.
Othello, Act III, Sc. 3, l. 330.
3. Romeo and Juliet, Act IV, Sc. 1.

empirical knowledge of drugs and their uses (which, after all, was the only kind of knowledge on that subject possessed even by physicians of that day) was not monopolized by the medical profession down to the seventeenth century and even later. In the practical education of carefully instructed women of high and low degree, cookery and other housewifely arts were scarcely more a matter of course than was the care of the sick; and this latter included prescribing for the commoner diseases. Country ladies were expected to keep well-stocked drug-closets and to be ready to dispense remedies to their families or dependents. The old village wives gathered herbs and simples and concocted medicaments. Formulas were handed down in families. One need only conjecture that Shakespeare as a boy often loitered about while his mother was at her household duties, or sometimes listened to the old women's gossip in or about Stratford, to realize that most of the information in his plays concerning drugs and their uses may easily have been absorbed unconsciously in his early youth.

The hint in regard to the circulation of the blood in Brutus' speech about "the ruddy drops that visit my sad heart"[4] indicates knowledge of another grade, for anatomy and physiology were mysteries to all but a few of the deeply learned. "Julius Caesar" was written before the publication of Harvey's "De Motu Cordis et Sanguinis;" but Shakespeare's words, of course, do not imply knowledge of the true route of the circulation, as explained by Harvey, but only that general conception of the blood as a circulating fluid, in some way propelled by the heart, which was current in pre-Harveian times. Here, again, one is not required to assume that Shakespeare was a specialist in order to account for his possession of an idea which was the common property of scholars and which must have appealed to the constructive imagination of such a mind as his.

The descriptions of mental disease in Shakespeare's plays, moreover, show astonishing force, veracity and discrimination. It would seem that he must have had unusual opportunities for the study of diseased minds. Once more, however, the difference in times and customs must be taken into consideration. The insane in those days were not necessarily shut away from the sight of normal men. Here a violent maniac was "bound and laid in some dark room" by those responsible for him, as Antipholus of Ephesus was confined when suspected of lunacy by his wife; there a harmless lunatic roamed the country like crazed Lear and "poor Tom o' Bedlam;" while elsewhere a hapless creature like distraught Ophelia lived unrestrained amid her ordinary surroundings. It is probable that insane people were no rare sight anywhere in Shakespeare's day; but it appears, according to some documents recently brought to light and published[5] by Professor Wallace of the University of Nebraska, that Shakespeare may have had an exceptional number of cases of insanity brought under his view. These manuscripts, the records of a case in the London Court of Requests in 1612, show that Shakespeare lived for some years with a Huguenot family named Mountjoy at the corner of Silver and Muggle (now Monkwell) Streets. At the north end of Muggle Street was Ambrose Nicholas' almshouse, which probably, like many other almshouses in that day and since, sheltered insane as well as sane paupers.

Another interesting field for conjecture is furnished by the fact that Barber-Surgeons' Hall stood almost opposite to Shakespeare's residence on Muggle Street. It seems not unlikely that he may have come into contact with some of the members of the Guild of Barber-Surgeons, and that some, at least, of his medical knowledge may have been gained from this contact.

Perhaps, after all, we weary ourselves overmuch in seeking to find the specific sources of the amazing variety of knowledge displayed in Shakespeare's plays. Genius does not amass laborious loads of foreign learning, but selects what it needs with the sure instinct which guides the bee to the flower. Shakespeare's medical knowledge, if measured even by contemporary professional attainments, probably would have been found but scanty, like his "small Latin and less Greek." It is the unhesitating sureness with which he used what he did know that makes his work a marvel for all time.

4. Julius Caesar, Act. II, Sc. 1.
5. Wallace, C. W.: Harper's Month. Mag., March, 1910.

THE SANITARY SIDE OF THE GARBAGE QUESTION

In an American city of five hundred thousand population the refuse amounts to about three hundred thousand tons per year. This includes the garbage proper, or swill, ashes and miscellaneous rubbish.

From a sanitary point of view the proper disposal of a city's waste has a bearing on disease that cannot be waved aside lightly. The garbage, a fermenting and decomposing mass with a sour, noisome odor, is offensive enough to demand prompt and careful removal; and even though it does not directly "breed" disease, it does furnish a breeding-place for flies and food for rats and other disease-transmitting vermin. Boards of health, therefore, are entirely justified in demanding stricter regulations concerning the handling and collection of this material.

The care of the garbage in the household and its collection are even more important for sanitation than is its final disposal. Boards of health should require householders to keep kitchen refuse in tight, well-covered cans. These should be emptied at least daily in summer, and scalded out at frequent intervals. A good way to disinfect a garbage-can and to prevent odors is to burn it out with a fire of old paper. The collecting-cart should be water-tight and carefully covered. In these days of metallic carts it is a disgrace for any city to use the old leaking and reeking wooden vehicles. The employees who gather the materials should be

clothed in decent, clean khaki-colored uniforms. The uniforming of such a sanitary corps of "brown-wings" will add a little to the cost, but will pay for itself.

Most of our cities have had sad experience in the burning of garbage by the so-called "American method," known as incineration. Of two hundred and twenty-five incinerating furnaces erected in the United States about half have been abandoned because they became intolerable nuisances. The cause of this is the burning of the garbage at a low temperature. In order to correct this imperfection of the low-temperature incinerator, secondary fires have been introduced into some of them, to burn the secondary gaseous products of combustion, but with only partial success. Meanwhile European cities, both British and Continental, have demonstrated that it is possible to burn garbage at a high temperature (above 1,250 F.) under forced draft without the least complaint from those living in the neighborhood of the "destructors." In the English destructor the ashes and garbage are burned together. This has several advantages. It simplifies the collection; the ashes absorb the moisture from the swill, a process of desiccation which retards or restrains fermentation; while on the other hand the moisture from the swill wets the ashes and prevents them from blowing about. Although the ashes have been through the fire, they still contain much unconsumed carbon that will burn under forced draft, and at the very high temperature thus produced. The resulting ash is mostly in the form of a vitreous clinker that makes splendid material for filling, paving or concrete. Many of these destructors are placed in the heart of European cities, thereby shortening the haul and diminishing the cost. The caloric value of mixed garbage and ashes is surprisingly large and the heat may be used for municipal purposes. These destructors are now in successful operation in three American cities and municipalities (New Brighton, Long Island; Seattle, Washington, and Milwaukee, Wisconsin), and two in Canada (Westmount, a suburb of Montreal, and Vancouver, B. C.). The destructor at Milwaukee, which is just finished, is the largest of its kind.

A few cities (Cleveland and Columbus, Ohio), use the method of "reduction," and obtain a profit from the grease and the tankage, the latter being of value as fertilizer. About 5 per cent. of American garbage may readily be extracted in the form of grease.

The remaining refuse consists largely of paper, cardboard, twine, boxes, wood, old shoes, rubbers, rags, tin cans, bottles, all of which have a market value that more than repays sorting them out. Colonel Waring long ago showed that about 90 per cent. of such waste may be reclaimed for commercial uses.

Many of our overgrown cities still use the village method of disposing of ashes and rubbish on dumps. This method is clearly objectionable, and is an evidence of backwardness in municipal sanitation and civic pride. Our American cities would do well to look to this problem of collecting and disposing of their waste in an orderly, unobjectionable and sanitary manner.

PUBLIC SUPPORT OF NATIONAL HEALTH LEGISLATION

In the campaign now being carried on for the establishment of a national department of health, the emphatic endorsement of the general public is of the utmost importance. For twenty-five years past, the medical profession of the United States, both as individuals and as an organization, have been urging the importance and necessity of such legislation. The position of the profession on this question is, therefore, so well known to members of Congress that the influence of physicians is to a certain extent discounted. Members of Congress are perfectly willing to admit the demand for such legislation as far as the medical profession is concerned. What is needed, however, to convince them of the importance of such legislation is a positive expression of opinion from prominent business and professional men outside of the medical profession. It is, therefore, of the utmost importance that physicians interested in the passage of adequate public health legislation by Congress should use all proper means to secure expressions of opinion from prominent business men, lawyers, judges, educators and others of influence. If the members of Congress can be shown that a strong popular demand for such legislation exists and that it is based on a thorough understanding of the necessity of federal regulation of public health, there will be no question as to the adoption of such legislation.

Medical News

CONNECTICUT

State Society to Hold Meeting.—The annual meeting of the Connecticut State Medical Society will be held at New Haven, May 25 and 26. Dr. Samuel D. Gilbert is president and Dr. Walter R. Steiner, Hartford, is secretary.

Society Meetings.—The one hundred and seventeenth annual meeting of the Windham County Medical Association was held Thursday, April 21, at the Hotel Hooker, Willimantic. The meeting was called to order and the annual address made by the president, Dr. John Weldon, of Willimantic. Two new members were admitted to membership. Dr. William L. Higgins, of South Coventry, and a member of the Connecticut State Legislature, spoke on recent medical legislation. The following officers were elected for the ensuing year: President, Dr. George M. Burroughs, Danielson; vice-president, Dr. James L. Gardner, Central Village; secretary-treasurer, Dr. J. Hobart Egbert, Willimantic; state delegates, one year, Dr. Robert C. White, Willimantic; two years, Dr. Seldom B. Overlock, Pomfret; councilor, Dr. John B. Kent, Putnam; and censors—three years, Dr. Robert C. Paine, Thompson; two years, Dr. Owen O'Neill, Willimantic; one year, Dr. Clarence E. Simonds, Willimantic.——At the one hundred and eighteenth annual meeting of the Fairfield County Medical Association, held in Bridgeport, April 12, the following officers were elected: President, Dr. Herbert E. Smyth, Bridgeport; vice-president, Dr. William L. Griswold, Greenwich; secretary, Dr. Frank W. Stevens, Bridgeport; treasurer, Dr. James D. Gold, Bridgeport; councilor, Dr. Samuel M. Garlick, Bridgeport; and censors, Drs. Edward M. Smith, Bridgeport; David C. Brown, Danbury, and Samuel Pierson, Stamford.——At the one hundred and eighteenth annual meeting of the Middlesex County Medical Association, held in Middletown, April 14, the following officers were elected: President, Dr. Matthew W. Plum-

stead, East Haddam; vice-president, Dr. Daniel A. Nolan, Middletown; clerk, Dr. Arthur B. Coleburn, Middletown; censors, Drs. John E. Bailey and James H. Kingman, Middletown, and Miner C. Hazen, Haddam; and delegates to the state society, Drs. Charles B. Young, Middletown, and George N. Lawson, Middle Haddam.

ILLINOIS

Meeting of State Society.—The Illinois State Medical Society will meet at Danville, May 17-19. Dr. George W. Crile, Cleveland, Ohio, will deliver the address on surgery.

Board of Health Created.—The city of East Moline has created a board of health, and Dr. Henry J. Love was made health commissioner. The other members of the board are Mayor Johnson and the city marshal.

Epidemics.—An epidemic of fourth disease has made its appearance at Princeton, thirty cases having occurred.——Twenty cases of pneumonia have occurred at the Illinois Southern Hospital for the Insane, located at Anna. The epidemic is now under control.

Medical Library.—At the last meeting of the Rock Island County Medical Society, through the efforts of Drs. Louis Ostrom and William H. Luedwig, Rock Island, a medical library was established, to be located in the Denkmann Memorial Building at Augustana College.

Medical Society Meeting.—At the meeting of Hamilton County Medical Society at McLeansboro, April 13, Dr. Paris M. Nation, McLeansboro, county coroner, was elected president; Drs. William W. Hall and Harry W. Dale, McLeansboro, vice-presidents; Dr. Charles M. Lyon, McLeansboro, secretary-treasurer; Dr. Harry W. Dale, McLeansboro, delegate to the state society, and Dr. Marion C. Dale, McLeansboro, alternate.

Personal.—Dr. John W. Dobson, Bloomington, has been elected county physician of McLean county.——Dr. George W. Furch has been appointed examining surgeon for the marine corps at Quincy.——Dr. Frank H. Jenks, acting superintendent of the Elgin State Hospital, has resigned and will assume charge of the Rockford Sanitarium operated by the late Dr. Penn Ransom, who was killed in an automobile accident.——Dr. Edwin A. Weimer, Peoria, was fined in the police court for failure to report a case of smallpox.

Chicago

Detention Home Quarantined.—The dependent children and delinquent girls' section of the Juvenile Detention Home is under quarantine on account of measles and diphtheria. The cases are mild and there is no danger of the disease spreading.

Save the City Water Supply.—An important measure for safeguarding health in Chicago was advanced in Congress April 19, when the Mann bill, prohibiting the dumping of refuse in Lake Michigan within eight miles of the shore, was ordered favorably reported in the House by the Interstate Commerce Committee. This is one of the measures strongly urged by Health Commissioner Evans.

Henrotin Statue Unveiled.—A bronze statue of Ferdinand Henrotin, founder of the hospital which bears his name, was unveiled April 19, at the Henrotin Memorial Hospital, La Salle avenue and Oak street. The statue was the gift of the Chicago Polyclinic and was wrought by Mrs. Philo R. King. Dr. John W. Chew, head of the staff, presided at the unveiling, and Dr. William T. Belfield, a former associate of Dr. Henrotin, delivered the address.

Personal.—Dr. Niles T. Quales, of the Chicago Norwegian Colony, has been decorated by King Haakon VII of Norway, with the Order of St. Olaf, in recognition of the extensive charitable work carried on by Dr. Quales among his countrymen.——Dr. John A. Stevenson, charged with pandering, was freed of the charge in municipal court, April 20.——Dr. Archibald Church has resigned as consulting neurologist to the Washington Park Hospital.——Dr. Joseph Zeisler has been elected a corresponding member of the Societa Italiana di Dermatologia e Sifilografia.

Plan for Contagious Disease Hospital.—Three hundred members of the Chicago Day Association, including society women and men of wealth, met at the First National Bank Building, April 22, and made preparations to collect a large fund for the building of a hospital for contagious diseases. Dr. William A. Evans, health commissioner, addressed the meeting on the necessity for this hospital, calling attention to the fact that at present the city's sick poor had no place to go except to the county hospital, and there accommodations are insufficient. The proposition that the city and county build a contagious disease hospital was halted by Corporation Counsel Brundage by reason of lack of funds on the part of the city. A committee of the hospital commission, consisting of Drs. William A. Evans and William L. Baum, recommended that the city take care of tuberculosis cases in the early stages and that the county take care of cases in the last stages.

INDIANA

Epidemic of Measles.—Terre Haute is reported as having a severe epidemic of measles.

Health Officers to Confer.—Dr. John N. Hurty, Indianapolis, secretary of the State Board of Health, has issued formal notice to all health officers of the state, announcing the annual conference to be held in Indianapolis, May 10.

Undertakers Must Fumigate Houses.—Dr. Joseph P. Seale, health officer of Fairmount, has notified the undertakers of the city that in the future when they take charge of a body where death is due to tuberculosis, the house must be correctly fumigated following the funeral in accordance with the state law.

Personal.—Dr. Frank F. Hutchins, Indianapolis, and Burton D. Myers, Bloomington, have gone to Europe for the study of nervous diseases.——Dr. O. P. Mercer, Reelsville, has been appointed surgeon for the Vandalia Railroad with headquarters at Indianapolis.——It is reported that Dr. S. Kenosha Sessions, physician at the Southern Indiana Hospital for the Insane, has been dismissed for failure to report the birth of a child to an unmarried attendant at the hospital. Dr. Munson, formerly located in India in the service of the British government, has succeeded Dr. Sessions.——Dr. Charles L. Thomas, Logansport, has sued an automobile company for $50,000 damages for injuries received while riding in a car being demonstrated by the defendant company.——Dr. William D. Schwartz, Portland, has been appointed secretary of the board of health.——Dr. Frank P. Norbury, Kankakee, Ill., president of the Mississippi Valley Medical Association, addressed the Allen County Medical Society on "Medical Quackery," April 19.

IOWA

Distributing Stations for Antitoxin.—The Iowa State Board of Health has made arrangements to establish stations for the distribution of diphtheria antitoxin at cost.

Oppose Lengthening School Year.—The Iowa State Board of Health has gone on record as opposing the plan to lengthen the school year. The board asserts that the health of the child is paramount and that the increased school year will be detrimental.

Personal.—Dr. Jasper E. Guernsey, Olin, has been appointed local surgeon for the Chicago, Milwaukee and St. Paul Railroad.——Dr. Albert H. Peterson has been reappointed health physician of Ottumwa.——Dr. George W. May has been appointed health physician of Cascade.

State Society Meeting.—The Iowa State Medical Society will meet at Des Moines May 18 and 19. Dr. John B. Murphy, Chicago, will be the guest of the society. The influence of public school life on the physical development of the child will be one of the principal topics for discussion.

Society Meeting.—The thirty-seventh semi-annual meeting of the Washington County Medical Association was held at Washington, April 13. Dr. Joseph H. Hull, Washington, was elected president; Dr. William H. McLaughlin, Riverside, secretary-treasurer, and Drs. Edmund R. Jenkins, Washington; George W. Hay, Washington, and George W. Dosh, Brighton, censors.

KANSAS

Antituberculosis Society at Topeka.—The Topeka Antituberculosis Society, with A. A. Godard as president, was organized April 13. A constitution and by-laws were adopted, and addresses were made by D. M. Fisk, of Washburn College and Mr. Deacon, of the State Board of Health.

Society Meetings.—The Golden Belt Medical Society held its semi-annual meeting in Salina, April 8. The following officers were elected: Dr. Oliver D. Walker, Salina, president; Drs. W. D. Whitmer, Abilene, and James D. Colt, Manhattan, vice-presidents; Dr. Louis O. Nordstrom, Assaria, secretary, and Dr. Winfield S. Harvey, Salina, treasurer (re-elected).

Public Health Meeting.—At a public health meeting at Wellington, under the auspices of the Sumner County Medical Society, Dr. Samuel J. Crumbine, Topeka, secretary of the Kansas State Board of Health, delivered an address on the subject "Water and Soil Pollution." Other public questions were discussed by members of the society, Ex-Judge W. T. McBride and Senator George Hunter. A resolution was passed that congressmen from Kansas be requested to support the bill establishing a national bureau of public health.

MAINE

Gift to Maine State Sanatorium.—Mr. E. D. Chamberlin, of Massachusetts, has given $15,000 to pay the debts of the Maine State Sanatorium Association, and in addition, has placed the sum of $200,000 in the hands of three trustees, the income of which is to be used for the running expenses.

Transfer of Tuberculous Insane.—Ten men and eleven women tuberculous insane patients have been transferred from the Maine Insane Hospital at Augusta, to the Eastern Maine Insane Hospital, Bangor, under the direction of Drs. Sturgis and Carl J. Hedin, Augusta. A new building has been provided at Bangor for the tuberculous patients.

Personal.—Dr. Ralph A. Parker, Auburn City, and Dr. Herbert S. Sleeper, Lewiston, members of the medical staff of the Central Maine General Hospital, Lewiston, have been appointed on the staff of the Auburn Antituberculosis Association.——Dr. Thomas F. Conneen, Portland, has gone to New York, and will go thence to Germany for study.——Dr. Harry W. Mitchell, superintendent of the Eastern Maine Insane Hospital, Bangor, has resigned, to take effect June 15. He has been appointed superintendent of the Danvers Insane Hospital, Danvers, Mass.

MARYLAND

New Cottages to Be Erected.—Steps will be taken at once to erect four new cottages, each to accommodate 75 patients, at Springfield Asylum for the Insane, Sykesville.

Officers Chosen.—At the annual meeting of the Section on Medicine and Surgery of the Medical and Chirurgical Faculty of Maryland, Dr. Joseph C. Bloodgood was chosen chairman; Dr. Alexius W. McGlannan, secretary-treasurer, and Dr. George A. Fleming, a third member of the committee, all of Baltimore.

Symposium on Hookworm.—A feature of the annual meeting of the Medical and Chirurgical Faculty, April 27, was a symposium on hookworm disease. The speakers were Prof. William H. Welch, Dr. Charles W. Stiles, and the secretaries of the state boards of health of Maryland and North Carolina.

Medical Missionaries Safe.—News has been received that Dr. and Mrs. Edward H. Hume, missionaries, who were compelled to flee from Changsha to Hankow, China, when the Chinese burned the buildings of the Yale University Mission a few days ago, are safe. Dr. Hume is a medical graduate of Johns Hopkins, and his first missionary work was in India. After a year and a half there he went to Changsha to found a mission.

Reunion of Alumni.—Cards have been sent out for a reunion of the alumni of the Johns Hopkins Medical School, on May 6 and 7. There are about 600 graduates and this will be their first meeting since 1893, when the school was opened. The object is to effect a permanent organization. There will be scientific and medical discussions. The committees are in charge of Drs. Thomas R. Brown and J. H. Mason Knox, Baltimore, and Joseph H. Pratt, Boston.

Hospital Report.—According to the thirty-second annual report of the Presbyterian Eye, Ear and Throat Charity Hospital, 842 patients were treated in the hospital and 10,539 cards were distributed to dispensary patients, during the past year. The number of visits to the hospital was 35,248; the daily average of patients in the dispensary was 110. Since the establishment of the hospital, 32 years ago, there have been 278,711 patients and 1,000,853 visits.

New Buildings for Johns Hopkins.—Announcement is made by the Johns Hopkins trustees that they are ready to start active work towards erecting the new buildings at Homewood, the new site in the northern suburbs. The architects have been selected to draw plans. The buildings will cost $1,700,000 and will be the most extensive ever proposed for an institution in Baltimore. The initial plan calls for a group of six, two to cost $250,000 each and four to cost $150,000 each.

Personal.—A verdict of $1,000 was awarded against Dr. James L. Truax, Baltimore, for alleged maltreatment of a broken arm.——Dr. Solomon C. Katzoff, Baltimore, was painfully bruised by being thrown from his carriage in a runaway accident, April 19.——Dr. Isaac T. Coston has been elected mayor of Pocomoke City for the third consecutive term.——Dr. Thomas McCrea, associate professor of medicine in Johns Hopkins Medical School, was operated on for appendicitis at Johns Hopkins Hospital, April 21.

Health Officers Appointed.—The county commissioners of Baltimore County have appointed the following: County health officer, Dr. James F. H. Gorsuch, Fork; district health officers, Drs. Arthur H. Mann and Henry F. Shipley; Henry A. Naylor, Pikesville; Harry M. Slade, Reisterstown; D. M. Resh, Beckleyville; Joseph S. Baldwin, Freeland; Eugene W. Heyde, Parkton; Benjamin R. Benson, Cockeysville; Richard C. Massenburg, Towson; J. T. Payne, Phœnix; James F. H. Gorsuch, Fork; William E. McClanahan, Baltimore; Frank H. Ruhl, Landsdowne; William F. Clayton, Baltimore, and John W. Harrison, Middleriver.

For Widows and Orphans.—The Ladies' Auxiliary of the Widows' and Orphans' Fund turned over to the Medical and Chirurgical Faculty, at its annual meeting, April 26, $1,047.91, as the results of the year's work. The fund is a permanent one and the interest alone is used for the relief of widows and orphans of deceased physicians. Mrs. Joseph H. Branham is president. The fund is independent of the Board of Managers of the Home for Widows and Orphans, a charity founded by the State Medical Society. At the annual meeting, April 22, receipts of $110 were reported. Mrs. Eugene F. Cordell was elected president. It is the plan to locate the home ultimately in the suburbs of Baltimore.

Society Meetings.—The Montgomery County Medical Society elected the following officers April 19: President, Dr. William L. Lewis, Kensington; vice-president, Dr. J. Dudley Morgan, Chevy Chase; secretary-treasurer, John L. Lewis, Bethesda; censors, Drs. Claiborne H. Mannar and Frederick N. Henderson, Rockville; delegate to the State society, Dr. James E. Deets, Clarksburg, and alternate, Dr. Otis M. Linthicum, Rockville. Addresses were made by the retiring president, Dr. Otis M. Linthicum, and Dr. G. Milton Linthicum, president of the Medical and Chirurgical Faculty of Maryland.——At the meeting of the Baltimore County Medical Society, held at Mount Washington, April 22, Dr. William H. Welch, president of the American Medical Association, spoke on the good work accomplished by THE JOURNAL in the war against injurious nostrums. Of 1,000 proprietary medicines examined 400 were found to be frauds and most of the remaining 600 have been changed, and thus made acceptable. He also spoke of the work done by the Association for the improvement of medical education. "The influence of the American Medical Association," he said, "is most powerful, and I rank it ahead of the state medical boards. Improvements in this line are rapid and I predict a great future for this country in higher medical education."

MISSOURI

Will Move to Jefferson City.—After May 1, the office of state bacteriologist will be moved to Jefferson City, where Dr. Newton McVey will conduct the work of the laboratory.

Plan Change in Health Board.—Kansas City is contemplating abolishing the health board and putting the work of that board under a health commissioner with full authority to act.

Society Meeting.—The Saline County Medical Association met at Marshall, April 12, and elected the following officers: Dr. William Harrison, Marshall, president; Drs. John R. Hall, Marshall, and Frank A. Howard, Slater, vice-presidents; Dr. Roy H. Dyer, Marshall, secretary; Dr. Frank A. Howard, delegate to the state convention at Hannibal in May.

Personal.—Dr. Abra C. Pettijohn, Brookfield, has been appointed superintendent of St. Joseph Hospital for the Insane.——Dr. William A. Clark, Jefferson City, has been appointed division surgeon of the Missouri Pacific and Missouri, Kansas and Texas Railway, with headquarters at Jefferson City.——Dr. Samuel A. Poague, Clinton, has been appointed surgeon for the M. K. and T. Railroad, with headquarters at Clinton, in place of Dr. John H. Britts, deceased. ——Dr. Eugene Cohn, St. Louis, has been appointed superintendent of the State Hospital for the Insane at Anna, Ill.

NEBRASKA

Hospital Opened.—St. Luke's Hospital, an institution having accommodations for 30 patients, has been opened in North Platte.

Personal.—Dr. John A. Parmenter, Morse Bluff, has been appointed physician at the Hastings Insane Asylum.——Dr. J. Clyde Moore, Jr., Lincoln, has been appointed clinical assistant at the University of Nebraska College of Medicine.

State Conservation Congress.—The State Conservation Congress, held in Lincoln March 29 and 30, was addressed by Drs. Waite and Wilson, of Lincoln; Mackaye, of Norfolk, and Quigley, of North Platte. The doctors advocated a state lecturer on tuberculosis and venereal diseases, a state sanatorium for

tuberculosis and a state-wide system of medical inspection of schools. The congress adopted resolutions favoring these measures.

Society Meetings.—The Nebraska State Health Association, which is an organization of the public health officers of the state, will meet in Lincoln, May 9 and 10. All persons interested in the betterment of public health are invited to be present.——The Harlan County Medical Society met March 9, at Alma, and elected the following officers: Dr. Thomas E. Massey, Huntley, president; Dr. C. Herbert Munger, Republican City, vice-president; Dr. Samuel M. Baker, Alma, secretary-treasurer, and delegates to the state society, Drs. William L. Sucha, Orleans, and Thomas E. Massey, Huntley. A physicians' protective association was formed at the meeting. ——The physicians of Brown, Rock and Keyapaha counties organized a medical society for those counties, at Bassett, April 4. Dr. George O. Remy, Ainsworth, was elected president; Dr. Jonathan J. Evans, Springview, vice-president, and Dr. Charles H. Root, Bassett, secretary-treasurer.——The Knox County Medical Association held its annual session at Creighton, April 6, and elected Dr. Czar C. Johnson, Creighton, president; Dr. Roy Crook, Winnetoon, vice-president; Dr. John B. Bates, Verdigris, secretary-treasurer, and Dr. Willard K. Clark, Niobrara, censor. A uniform system of fees was adopted for all towns of the county. The next meeting will be held in Bloomfield in October.

NEW YORK

Free Bed Fund for Loomis.—At an entertainment given by the Loomis Sanatorium Guild in the Waldorf-Astoria, New York City, the sum of $2,700 was raised for the free bed fund of the Loomis Sanatorium, Liberty.

Sale of Cocain Restricted.—Governor Hughes has signed the bill providing that persons who sell or furnish cocain or eucain as permitted by law on a physician's prescription, shall, at the time of sale give to the purchaser a certificate stating the seller's name and address, the name and address of the physician on whose prescription the drug was furnished, and the date of sale and the amount sold.

A Women's Hospital.—Mrs. O. H. P. Belmont has just opened what is said to be the first hospital managed entirely by women at Hempstead, L. I. Mrs. Belmont gave to the hospital, as a memorial to Mr. Belmont, nearly the entire $50,000 which the building cost. This hospital will not only be managed by a board of women but has a woman superintendent and will have women house physicians.

Personal.—Dr. William L. Russell has been appointed superintendent of the Long Island State Hospital at Brooklyn to succeed Dr. Oliver M. Dewing.——Dr. Stephen Smith, New York City, has been reelected vice-president of the State Board of Charities for the eighth term.——Dr. Francis S. Swain has been appointed health officer of Corning to succeed Dr. Edward W. Bryan.——Dr. David M. Totman, health officer of Syracuse, has been appointed, by the state commissioner of health, medical expert on the diagnosis of contagious diseases, particularly smallpox.

New York City

Bequests.—The will of the late William Hymans of this city leaves $1,000 to Mount Sinai Hospital and $5,000 to Beth Israel Hospital. At the death of Mrs. Hymans, Mt. Sinai will receive $5,000, the Montefiore Home $5,000, and the Lebanon Hospital $1,000.

Medical Society Loses.—Paul Schmidt, who was arrested some time ago on the charge of practicing medicine without a license, brought suit against the New York County Medical Society for $100,000, and a verdict in his favor was rendered to the amount of $7,500.

Hospital Alterations.—Plans have been filed for extensive alterations to the Skin and Cancer Hospital at Second avenue and Nineteenth street. The two adjoining buildings have been purchased. The improvements will include a home for nurses and employees which will cost $3,000.

Personal.—Prof. F. Lange of the University of Munich is here to attend the orthopedic congress in Washington, May 3-6. Speaking before the Section on Orthopedic Surgery at the Academy of Medicine, Professor Lange stated that America stands first among nations in its elaborate methods of caring for crippled children.——Dr. Salvatore Romano, an Italian physician, pleaded guilty to the charge of perjury in connection with the trial of an Italian counterfeiter. He was paroled for sentence.——Dr. and Mrs. W. H. Fox, Dr. Edward W. Pinkham and Dr. and Mrs. John A. Hartwell have sailed for Europe.

Another Dinner for Dr. Jacobi.—Dr. Abraham Jacobi was the guest of honor on the eightieth anniversary of his birth at a dinner at the Hotel Astor April 24, given by the trustees, the Alumni Association, and the physicians of the German Hospital and Dispensary. Dr. Jacobi was presented with an engrossed set of resolutions. In the afternoon of the same day three hundred persons gathered at Mount Sinai Hospital in celebration of the fiftieth anniversary of his connection with that hospital. It was announced that the endowment fund had been collected on the income of which they expected to establish a library in the hospital to be called the Abraham Jacobi Library. The bronze bust of Dr. Jacobi on exhibition in the main foyer had been presented to the doctor by the medical and surgical staff as a token of esteem.

OREGON

Hospital Additions.—An annex to St. Vincent's Hospital, Portland, costing $200,000, is completed and ready for occupancy.——Mr. Horace C. Henry, a wealthy contractor of Portland, has given $100,000 and forty acres of land for the establishment of a cottage sanatorium for the treatment of tuberculosis.

Personal.—Drs. J. H. and Charles Brewer, Salem, have gone to Europe for study.——Dr. Harry F. McKay, Portland, has been appointed a member of the State Board of Medical Examiners, to succeed Dr. William H. Byrd, Salem.——Dr. Robert J. Pilkington has been appointed city physician of Astoria, to succeed Dr. Clara Reames.——Dr. Frank H. Vinell, Roseburg, has been appointed local pension examining surgeon. ——Dr. Harvey J. Clements, Salem, has been appointed medical director of the Oregon State Tuberculosis Sanatorium.

PENNSYLVANIA

State Helps Many Consumptives.—The physicians of the State Tuberculosis Dispensary in Hazleton report having thus far discharged forty-two patients as cured.

Railroad Relief Fund.—The Lehigh Valley Railroad announces that $85,689.30 was paid from the relief fund in the year 1909 for the benefit of the company's employees, leaving a balance of $28,099.91. In thirty-two years the contributions have amounted to $1,485,973.02. Of this the employees have paid half and the company half.

School Inspection.—State Health Commissioner Samuel G. Dixon has completed the medical inspection of rural schools in Dauphin, Cumberland and Lancaster counties. This work will form a basis for the examination of school children in rural districts throughout the entire state. Twelve thousand five hundred and fifty-five children were examined in 572 schools; 2,439 children presented one or more physical defects, tending to handicap them in school work; 1,929 showed defective vision; 249, defective hearing; 284, defective nasal breathing, and 55 presented conditions which indicated tuberculosis.

Philadelphia

Officers Elected.—The officers of the Woman's Hospital Medical Society for the current year are: President, Dr. Sarah H. Lockrey; vice-president, Dr. M. Louise Diez; treasurer, Dr. Annie L. Conner; secretary, Dr. Mary Thomas Miller.

Jefferson Alumni Dinner.—The annual dinner of the Alumni Association of the Jefferson Medical College will be given at the Bellevue-Stratford Hotel, June 4. A special feature of the dinner will be the reunion of the classes graduated from 1880 to 1910.

Testimonial Dinner to Dr. Tyson.—Physicians from all over the eastern part of this country will do honor to Dr. James Tyson, when a large dinner will be given, May 5, at the Bellevue-Stratford. Dr. William Campbell Posey, of 2049 Chestnut street, is treasurer of the committee.

Charitable Bequests.—The estate of Thomas Irwin, valued at $6,700, is left in trust under his will to two sons and at the death of second of these the principal is to go to St. Mary's, Presbyterian and Episcopal Hospitals.——The will of the late Harriet B. Labe devises $300 to the Jewish Hospital Association for a free bed and $200 to the Jewish Foster Home and Orphan Asylum.

Consumption on the Increase.—According to the week's report of Health Department issued April 23, there was a slight decrease in the number of deaths from those reported the week preceding. There was one death from smallpox, the first since the epidemic of 1905. But a feature of the report was the great increase in the number of cases of consumption, from 79 last to 129 this week.

Smallpox Warning Issued.—Owing to the discovery of two cases of smallpox on April 17, an appeal has been made to the

public by the bureau of health to cooperate with the department in preventing the spread of the disease. It is urged that a physician be called in on the appearance of any illness of the slightest suspicious character. Dr. Andrew A. Cairns, chief medical inspector, declared that the small-pox on Front street was of the most malignant type he had seen in years. He said that the fact that the disease had existed in the city for over three weeks unknown to the health authorities proved that grounds exist for the request.

Personal.—Dr. James T. Rugh has been appointed consulting orthopedic surgeon at the Charity Hospital, Norristown.——Dr. Fritz Lange, professor of orthopedic surgery at the University of Munich, director of the University Orthopedic Polyclinics and superior surgeon to the Royal Hospital for Cripples of Bavaria, visited this city Monday and Tuesday, April 25 and 26. A clinical lecture on flatfoot was given by him at the Jefferson Hospital, Monday morning, and one on the same subject the following day at the orthopedic clinic of the University Hospital. Tuesday, from 2 to 4 p. m. he spent at the Orthopedic Hospital and later that afternoon inspected the Widener Home for Crippled Children.——Dr. James A. Irwin sailed for Europe April 23.——Dr. John M. Swan will become resident medical director of the Glen Springs at Watkins, N. Y., May 1.——Dr. J. Chalmers DaCosta has resigned from the staff of the Philadelphia General Hospital and Dr. Hubley R. Owen has been appointed in his place.——Dr. Leo S. Rowe of the Wharton School, and Dr. Charles H. Frazier of the Medical School of the University of Pennsylvania were named to represent the university at the forthcoming celebration of the one hundredth anniversary of the independence of the Argentine Republic during the summer.

TENNESSEE

Personal.—Drs. John Allen Gentry, John B. Steele, and M. A. Meacham have been appointed interns at the Erlanger Hospital, Chattanooga.

Conference of Health Officers.—The first conference of State, City and County Health Officers was held in Nashville, April 6 and 7. Seventy-four of the ninety-six counties of the state and twenty-five cities and towns were represented at the conference. The members were welcomed by Governor Patterson. Among the subjects discussed were pellagra, hookworm and tuberculosis, and resolutions on these subjects were passed. A resolution was also passed and a committee appointed looking toward the securing of legislation to define the duties of health officers and to regulate their pay. Dr. Charles W. Stiles, of the Rockefeller Institute, gave an illustrated lecture on the hookworm. A permanent organization was effected and the following officers elected: Kirby S. Howlett, Franklin, president; Dr. George W. Booker, Knoxville, vice-president, and Dr. Blackburn G. Tucker, Nashville, secretary-treasurer.

UTAH

Goiter in Utah.—The appearance of an epidemic of goiter in San Pete, Iron, Sevier and Cache counties during the past year has led the State Board of Health under Dr. Theodore B. Beatty to investigate the cause. Dr. John Sundwall, professor of anatomy at the University of Utah, has conducted the investigation. He found that in the small town of Monroe, 80 per cent. of the female population and 5 per cent. of the males were afflicted. In certain districts further south, it is found that more than half the women were affected. Dr. Beatty states that chemical tests show no constituents in the water not found in other regions where goiter is not prevalent. Geologic conditions will also be investigated.

VIRGINIA

Loving Cup Presented.—At a meeting of the Lynchburg Medical Society, held April 4, a loving cup was presented to Dr. Rawley W. Martin.

Resolutions in Memory of Dr. Kinney.—At a special meeting of the Roanoke Academy of Medicine, resolutions of affection and respect for the late Dr. Jefferson Kinney, a charter member of the academy, were adopted.

New Building for State Sanatorium.—The State Board of Health has let the contract for six new buildings at the State Tuberculosis Sanatorium at Catawba. When completed, this will give the sanatorium a capacity of 112 patients.

Gifts to University Medical College.—Dr. Stuart McGuire, Richmond, has given $10,000 toward a fund to rebuild the University College of Medicine, recently destroyed by fire. The fund will soon be completed and building will begin.

Personal.—Dr. E. P. Amiss, Harrisonburg, returned home April 6, after undergoing a successful abdominal section at Union Protestant Infirmary, Baltimore, five weeks before.——Dr. Davis, second assistant physician at the Eastern State Hospital, Williamsburg, has been promoted to first assistant to succeed Dr. Rea Parker, resigned.——The board of the State Epileptic Colony has elected Dr. Albert S. Priddy, Keyesville, former superintendent of the Southwestern State Hospital at Marion, superintendent of the colony. He takes charge at once.

Society Meeting.—At a meeting of the Northampton County Medical Society, held in Cape Charles recently, the following officers were elected: President, Dr. Edmund W. P. Downing, Franktown; vice-president, Dr. Bertram H. Gilmer, Townsend; secretary, Dr. Carlisle L. Nottingham, Cape Charles, and treasurer, Dr. William L. Dalby, Bridgetown.

Richmond College Merger Abandoned.—Because of failure to effect an agreement the University College of Medicine and the Medical College of Virginia will not be merged as has been announced, but will continue their separate existence. It is reported that the former will erect a new building on the site of that which was destroyed by fire last January.

Hookworm Found in School Children.—At the request of Dr. A. C. Fisher, Emmerton, Dr. C. W. Stiles and Charles G. Crane, of the United States Health and Marine-Hospital Service, examined 39 white school children from a school in the Washington District, Richmond county, to determine the frequency of hookworm infection. Of these 23 were boys and 16 girls. It was found that 37, or 94.8 per cent., harbored hookworms, as demonstrated microscopically. Seventeen pupils, or 43.5 per cent., lived in homes not provided with any privy. The remaining 22 live on farms with a surface privy open in the back. Nineteen reported having had ground itch, 12 deny ground itch, and 8 report that they do not know. The 37 infected spent their entire lives on the farms.

WISCONSIN

Janesville Without Health Officer.—The city council of Janesville voted recently to reduce the pay of city physician to $50 a year. The physicians all refused to accept the office at that figure and demand that it should be raised to $300.

Personal.—Dr. Orlando P. Sala, Bloomington, is seriously ill, as the result of cerebral hemorrhage.——Dr. Louis M. Warfield, Wauwatosa, formerly of St. Louis, has been made assistant superintendent and pathologist to the Milwaukee county hospital.

Epidemics in State Institutions.—The Insane Asylum at Mendota and the Northern Hospital, Oshkosh, are reported to have small epidemics of typhoid fever.——The State Home for Dependent Children, Sparta, is under quarantine for scarlet fever, there being 24 cases in the institution.

Physicians Sentenced.—Dr. Charles W. Beemer, Kenosha, who was arrested more than a year ago on a charge in connection with the death of a young woman, pleaded guilty and was fined $500 and costs.——Dr. William Jennings, Stevens Point, pleaded guilty to having committed arson, and was sentenced to three years in the penitentiary at Waupun.

Society Meetings.—The Iowa County Medical Society met at Dodgeville, April 7, and elected the following officers: Dr. Walter S. Lincoln, Dodgeville, president; Dr. John P. Parmley, Mineral Point, vice-president; Dr. William M. Gratiot, Mineral Point, secretary-treasurer, and Dr. Homer D. Ludden, Mineral Point, Dr. F. L. Crikelair, Hollandale, and Dr. Dennett B. Hamilton, Ridgeway, censors.

GENERAL NEWS AND COMMENT

Awarded a Gold Medal.—The Royal College of Surgeons of England has awarded a gold medal to Dr. Robert Fletcher, principal assistant librarian of the Library of the Surgeon General's Office, Washington, D. C., in recognition of his distinguished services in connection with the indexing of the catalogue of that library.

Typhus Investigator Ill with the Disease.—Dr. H. T. Ricketts, of the University of Chicago, who has been in Mexico for several weeks conducting research into the etiology of typhus fever, is ill with that disease; the latest reports of his condition are favorable, however. Of the success of Ricketts' researches our readers are aware through his papers on this subject published in THE JOURNAL recently.

Tuberculosis Sunday.—The National Association for the Study and Prevention of Tuberculosis is the agency which drafted into the crusade the ministers, priests, rectors and rabbis of the country. It furnished them with information, which was presented in thousands of the churches of the United States, April 24, showing the ignorance that fosters the great white plague, that claims 200,000 victims every

year in this country. An immense number of leaflets were distributed. Medical men, especially sanitarians, occupied the pulpits in many cases.

Monument to Dr. Crawford W. Long.—At Jefferson, Ga., April 21, a monument to Dr. Crawford W. Long was unveiled in the presence of a distinguished gathering of members of the Medical Association of Georgia, which was in session this week at Athens. The monument is in commemoration of the fact that Dr. Long was one of the first to use ether as a general anesthetic. James M. Venable, the patient on whom Dr. Long first operated under ether, is still living. Miss Emma Long, a daughter of Dr. Long, drew the cord which unveiled the monument. Dr. Woods Hutchinson of New York was the principal speaker.

Coming Meetings.—The Congress of American Physicians and Surgeons, with its component societies, the American Association of Genito-Urinary Surgeons, American Association of Pathologists and Bacteriologists, American Climatological Association, American Dermatological Association, American Gynecological Society, American Laryngological Association, American Medico-Psychological Association, American Neurological Association, American Ophthalmological Society, American Orthopedic Association, American Otological Society, American Pediatric Society, Association of American Physicians, and American Surgical Association, will meet in Washington, D. C., May 3-5.

Death of Dr. Carpenter.—The *British Journal of Children's Diseases* announces the death of its editor and founder, George Carpenter, M.D., London, 1890; M.R.C.S., England, and L.S.A., 1885; M.R.C.P., London, 1889; a member of many scientific societies and a prolific writer; at one time editor of *Pediatrics*, an Anglo-American journal devoted to diseases of children; who died suddenly at his home in London, March 27. His death is a notable loss to all those who study diseases of children, not only in Great Britain, but throughout the entire world.

LONDON LETTER

LONDON, April 16, 1910.

(From Our Regular Correspondent)

The New President of the College of Physicians

Sir Thomas Barlow, physician-in-ordinary to the king, has been elected president of the Royal College of Physicians in succession to Sir Douglas Powell. This office is the most important that can be held by a physician in Great Britain and is an ancient one dating from the year 1518. The appointment is only for one year, but as it has from the earliest period been customary to reelect the existing president for a number of years the total number of presidents to date is only 99. The ceremony of election is a quaint one. There are no nominations but each of the fellows present writes the name of the person he prefers on a slip of paper and places it in an urn provided for the purpose. Should a name be placed in the urn by two-thirds of those present its bearer is elected forthwith. In the contrary case a ballot is held in respect of the two whose names figure most often and a majority in favor of one decides the election. Among the most famous presidents are Linacre, Caius, founder of the college of that name at Cambridge, Glisson and Sir Thomas Watson. The greater number of the presidents have passed into oblivion and the fact that so few have achieved enduring fame can be explained by the fact that the election has been determined less by brilliancy of attainments than by level-headedness and unimpeachability of character in all respects, social and scientific. Even election to the fellowship is a more searching test than admission to the most exclusive club, and election to the presidential chair entails a still more rigorous scrutiny. Indeed men of world-wide eminence who seemed in every way marked out for the office have failed to obtain it because of some act, which though it could not be called an offense, was deemed by some of the fellows not in keeping with the best traditions of the college. Thus one distinguished man was not elected owing to the suspicion that he had not been so careful as he should have been as to the way his name had been used in connection with a business company. The present holder of the office is one of the most distinguished physicians of the day and he has made many valuable contributions to medical science. He is best known for his discovery of infantile scurvy (Barlow's disease). The office of President of the College of Surgeons approaches in social importance that of President of the College of Physicians, but it does not quite equal it, partly because it is seldom held for a term of years and partly because a physician ranks somewhat higher than a surgeon as his calling is associated with a university education and greater scholarship, while a surgeon is essentially a craftsman descended from the old barber-surgeons. However, the modern transformation of surgery from an art into a science has rendered this distinction rather shadowy.

Deaths Under Anesthesia

In a previous letter to THE JOURNAL an account was given of the report of a committee appointed by the government to inquire into coroners' inquests. This committee has now issued a further report on deaths under anesthesia. Leading anesthetists, such as Dr. Hewitt, Dr. Buxton and Dr. Silk; eminent surgeons, such as Sir Victor Horsley, Mr. Pepper and Mr. Clinton Dent; physiologists, such as Sir Lauder Brunton and Dr. Waller; and leading dentists were examined. The perils of anesthesia have attracted attention because of the great increase in the number of deaths under it in recent years. In 1866 the number of deaths registered as occurring in this manner was 5; in 1905 it was 155; in 1908, 235. But no absolute deductions can be drawn from these figures. As the law now stands, it is not compulsory to report a death under anesthesia administered for a surgical purpose; all that is necessary is to assign some cause for death. A distinction has to be drawn between death from an anesthetic and death under an anesthetic. Under anesthesia a person may die from the action of the anesthetic, from surgical shock, or from hemorrhage, or from a combination of these or other causes, such as asphyxia from the tongue slipping back, or regurgitation of food. Without investigation, it is impossible to say how far the anesthetic is the cause of death. The number of operations has increased much in recent years, and no statistics exist to show their relation to the number of deaths under anesthesia. Still, when all sources of error are allowed for, there appears to be an increasing number of deaths under anesthetics, and some of them are due to preventable causes. The committee thinks that every death under anesthesia should be reported to the coroner, who should exercise his discretion as to whether an inquest is necessary or not. As the law now stands, the administration of anesthetics is under no regulation. Apart from criminal intent, a bonesetter, a "beauty doctor," or a quack of any kind is as much at liberty to administer an anesthetic as a physician. Their only disadvantage is that if an accident occurs, the fact that they are not qualified is material evidence on the question of negligence. The committee thinks that this is a serious menace to the public, and that the administration of anesthetics should be regulated by law. It is urged that it should be made a criminal offense for any unqualified person, who is not acting under the personal supervision of a qualified physician, to administer a general anesthetic. But the committee does not think that registered dentists should be deprived of the right, which they have always had, to administer nitrous oxid. All dentists have to undergo a preliminary medical examination, and if training in the administration of nitrous oxid is made compulsory the public would be sufficiently protected. As many of the accidents which have occurred in connection with the administration of this anesthetic have occurred when the same person both administered the gas and operated; no person should attempt to do both.

With regard to methods employed in administering anesthetics there was curious difference of opinion among the expert witnesses. Some were of opinion that the way of safety lay in keeping the anesthesia light and that the anesthetic should be pushed only to the point of abolishing pain; others thought that the anesthesia should be profound, otherwise the danger of surgical shock was increased. The conclusion is drawn that the administration is not an exact science, and that the surgeon is between the Scylla of shock and the Charybdis of paralysis of the vital centers. With regard to the choice of an anesthetic, there is no consensus of opinion. Chloroform is largely used in England and still more largely in Scotland. Of the greater safety of ether there was much evidence; one witness declared it to be seven times as safe as chloroform. But it was regarded as unsuitable for the very young and the very old, and in cases of bronchial trouble. Instruction, both practical and theoretical, in the administration of anesthetics, the committee thinks, should be an obligatory part of the medical curriculum.

The Antituberculosis Campaign

Though the antituberculosis campaign has been carried on in Great Britain with great activity in many directions, little has been done in the way of establishing dispensaries for tuberculosis, which are so common on the continent of Europe.

Yet the first dispensary appears to have been founded in Edinburgh, in 1887, by Dr. R. W. Philip. It began in a humble way, as a nucleus of the antituberculosis organization in that city from which there has now developed an elaborate organization consisting of (1) the dispensary; (2) a sanatorium of 100 beds; (3) 60 beds for advanced patients set apart in the fever hospital; (4) a working colony for cured patients; and (5) compulsory notification of the disease. The program of the dispensary includes not only the ordinary treatment of tuberculosis patients, but the visitation of patients at their homes by a physician and specially trained nurse for the purpose of treatment and of investigation into the state of the dwelling and the general conditions of life, and also into the risk of infection of others. Not until last year, when the Paddington Dispensary for Tuberculosis was founded in London, was any attempt made to follow the example of Edinburgh. In London, the annual number of deaths from tuberculosis is over 6,000, and it is estimated that there are 60,000 patients suffering from the disease of whom 24,000 are incurable and 36,000 curable. Of those curable, Dr. Williamson, medical officer of the Paddington Dispensary, estimates that in only 6,000 is the disease sufficiently advanced to show itself by characteristic symptoms and signs. To render the antituberculosis campaign effective, an effort should be made to search out and treat the remaining 30,000. As tuberculosis has been found, with few exceptions, to be a domestic disease, these persons should be found among the relatives of the definitely consumptive. It is the great merit of the Paddington Dispensary that it attempts to supervise the home life of tuberculous patients and search there for "contacts" who may be in an early stage of the disease. A specially trained nurse visits the homes and prepares an elaborate report on the character of the neighborhood and the house, which includes such details as general aspect (clean, damp, dusty, smelly), number of windows (can they open and are they kept open by day and by night?), Does the patient sleep alone in bed or alone in the room? If he has moved within two years, what were his previous addresses? Have there been any illnesses or deaths in the house? What is the health of the other inmates? What precautions are taken to disinfect? Are there tubercle bacilli in the dust of the room? There is no doubt that this home supervision constitutes a great advance in the campaign against tuberculosis. Unfortunately, the hospitals have at present no means of adopting it. However, St. Mary's Hospital, which is situated near the Paddington Dispensary, realizing the great value of the method, is sending its consumptive patients to the dispensary for the purpose of obtaining its benefits.

Outbreak of Cerebrospinal Meningitis in London

London is threatened with an outbreak of cerebrospinal meningitis, a disease from which England has long been free, though, as recorded in previous letters, outbreaks occurred in 1907 in Scotland and Ireland. Already four deaths from the disease are reported from widely separate parts of the metropolis.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 15, 1910.

Educational Medical Trips to Health Resorts

Tours of medical study among the mineral springs and climatic resorts of France have been organized since 1899 to familiarize foreign and French physicians with French health resorts. These extremely numerous and varied resorts have been divided into five groups, according to their geographical situation. Each year in the first two weeks of September, a tour is conducted among the resorts situated in one region. The only persons allowed on these tours are physicians and their wives, and French and foreign medical students. The time is so arranged that each resort may be studied without waste of time from the following points of view: (1) visit to the springs and establishments under the direction of the physicians of the locality; (2) lecture on the therapeutic application of the waters and the other therapeutic features, such as climate, altitude, exercise, mechanotherapy, etc.; (3) excursion to gain a view of the general configuration of the country.

The medical tour of 1910 will take place from September 1 to September 15, under the scientific direction of Professor Landouzy, dean of the Paris college of medicine. It will comprise the resorts of Savoy and of the Dauphiné: Hauteville, Evian, Thonen, Saint-Gervais, Salins-Moûtiers, Brides, Pralognan, Challes, Aix-les-Bains, Marlioz, LeRevard, Allevard, La Motte, Uriage. For all particulars, inquiry may be addressed to Dr. Carron de la Carrière, president of the Société d'Hydrologie Médicale de Paris, 2, rue Lincoln, Paris, France.

Dedication of the Monument to Horace Wells

On March 27, under the presidency of Professor Dastre, member of the Académie des Sciences and of the Académie de Médecine, a monument was dedicated to the memory of the American surgeon-dentist Horace Wells, who in 1844 conceived the idea of applying to dentistry the anesthetic properties of nitrous oxid, which had been discovered under the name of "laughing gas" by Humphrey Davy in 1799. The method of Horace Wells was, however, perfected by Paul Bert, whose researches led to the possibility of obtaining a lasting general anesthesia by the mixture of nitrous oxid with oxygen. The monument is by the sculptor Bertrand Boutée, and is erected in the Place des Etats-Unis. The bust of Wells stands on a pedestal of white marble, on which is sculptured a medallion bearing the head of Paul Bert. It bears the inscription "A Horace Wells, novateur de l'anesthésie chirurgicale."

Third Congress of Practitioners

The third organized meeting of the rank and file of the profession to discuss exclusively practical questions met at Paris, April 7-10, with Dr. Gairal of Carignan, president of the Union des Syndicats médicaux de France, in the chair. There were 1,100 members enrolled, not counting the inscription of a certain number of medical associations. The first meeting of the kind, held at Paris in 1907, was attended by 1,500 members and the second, at Lille in 1908, by 1,200.

UNRESTRICTED CHOICE OF PHYSICIAN

The discussion of this subject, introduced by Dr. Bolliet of Lyons, ended in the adoption of resolutions endorsing the unrestricted choice of the physician in the sick benefit and mutual aid societies, and the treatment of the well-to-do among the members of the aid societies on the basis of ordinary patients. Dr. P. Vallat of Joinville-le-Pont dealt with the question of the free choice of the physician in the large corporations, asserting that the medical service of the great companies as at present organized fails to respect the dignity and the individual liberty of the sick, while it is at times accessible to the influence of the powerful to the detriment of the humble and of the physician's independence. He therefore proposed, and his resolution was adopted, that the unrestricted choice of the physician should be made compulsory in the administration of public and private services and industrial undertakings.

REFORM IN THE METHODS OF MEDICAL TEACHING

The agitation on this subject which has been maintained for some years in the French medical profession found utterance at the meeting, and the attacks, often rather discourteous, directed against the "officials" rendered decidedly uncomfortable the situation of the few professors, such as Drs. Pinard and Hayem, who felt it their duty to take part in the meeting. Dr. Lafontaine of Bordeaux in his paper insisted especially on the necessity of the suppression of the *agrégation* and protested against the present system of the *concours* and the favoritism which governs it. The essayist thought that the reform in medical teaching ought to be the work of practitioners themselves, and that it could be brought to a satisfactory conclusion only by the medical syndicates. The question, he believed, ought to be entrusted to a committee on reform, composed of equal numbers of those already holding medical offices and of representatives chosen by the practitioners at large. Professor Pinard expressed regret at seeing an antagonism between the "officials" and practitioners; for his part he knew only physicians. He feared that the campaign undertaken against the instruction in the medical colleges would bring discredit on physicians and reduce their prestige. He protested also against the statement that favoritism played an essential part in the *concours*. He declared himself personally a strong partisan of the system of the *concours*, which might be improved, but ought not to be suppressed. In spite of this wise advice, however, Dr. Lafontaine's conclusions were adopted.

The meeting, moreover, passed the resolution that for questions of medical instruction the Conseil médical supérieur de l'Instruction publique is an incompetent institution from a medical point of view since among its fifty-three members there are only three physicians and it ought to be replaced by a superior medical council composed of members of the teaching body and of an equal number of delegates chosen by the various professional societies.

ABORTION FROM THE MEDICOSOCIAL POINT OF VIEW

In his paper, Dr. G. Bertillon of Maisons-Laffitte showed the constant increase of the number of abortions. Professor Lacassagne estimated that there are at Lyons 19,000 abortions to 450,000 births, and that the number of induced abortions in Paris each year is not less than 150,000. Abortions are practiced especially by the midwives, who are too numerous to be able to earn a livelihood. The essayist, therefore, proposed to limit the number of midwives in order to shield them from unwholesome temptations. This resolution was adopted by the meeting, but the other two conclusions of the paper, one in regard to the oversight of midwives and the other in regard to the compulsory report of every miscarriage, natural or induced, were rejected. Professor Pinard especially protested energetically against every proposition to do away with the obligation of professional secrecy and to make a spy of the physician.

LIMITATION OF THE NUMBER OF MEDICAL STUDENTS

The meeting, while voting against the idea of a *concours* of admission for entrance to the medical colleges, believed that it was necessary to limit as much as possible the number of medical students, which is continually increasing. Accordingly it resolved (1) that the examinations should be more severe and every student who fails three times at one examination should be definitively excluded from all the medical colleges, and (2) that the number of colleges and schools, which have increased greatly since 1870, should be reduced.

SANITARY LEGISLATION

The meeting resolved that the responsibility of reporting epidemic diseases should rest solely on the head of the family or the one who takes his place, instead of on the physician as at present. Another resolution adopted demanded that the director of a bureau of hygiene should be a physician and one who had practiced medicine for at least five years.

ORGANIZATION OF THE HOSPITALS

Dr. L. Archambault of Paris emphasized especially the excessive centralization of the Assistance publique (Public Charities) and recommended the system of the autonomy of each hospital. After the reading of this paper and several other communications on the administrative organization of hospitals in foreign countries, and especially a communication from Dr. Koenig of Paris on the organization of the hospitals in the United States, and trained nurses, the meeting adopted the following resolutions: 1. In each hospital the physicians should have an active part in the administration. 2. The hospital should have administrative and financial autonomy and should be governed directly on the spot, and not from a distance and on paper by an irresponsible administration. 3. In France, as in certain foreign countries, the chief should be a physician aided by an administrative assistant. 4. These resolutions were to be sent to all the hospital physicians in France with the request that they sign a petition demanding from the ministry of the interior, in the interest of patients, the autonomy of the hospitals. 5. The vigilance committee is to study the causes of the bad administration in French hospitals and to communicate the results to the press.

BERLIN LETTER

(*From Our Regular Correspondent*)

BERLIN, April 6, 1910.

Industrial Insurance Discussion

The organized medical profession has been summoned to meet in Berlin, April 17, for the discussion of the provisions of the new bill for imperial industrial insurance. So far as can be judged from expressions in the medical press, it is recognized that the new bill introduces many important improvements over the first, but on the other hand, there are some essential demands to be met, without which peace between physicians and the sick benefit societies (Krankenkassen) cannot be expected. Especially there is a demand for a more favorable attitude of the law toward the free choice of physicians. It is to be expected that the medical association at this special session will express itself to this effect.

Permanent Commission for International Medical Congresses

The permanent commission for international medical congresses, appointed at Budapest, held its first executive sitting, March 29 and 30, at the Hague. Delegates were present from Germany, France, England, Italy and Holland. The chief matter of business was the provisions for the full meeting, that is to take place later. The subject of discussion was a suitable organization of international congresses, especially so as to avoid collision between general and special congresses.

Personals

Professor Krönig, of Freiburg, has unexpectedly declined the call to the directorship of the gynecologic clinic at the Charité, as successor of Bumm. It is rumored that there is an understanding that the Baden government will soon build a new gynecologic clinic at Freiburg for Professor Krönig and under his direction.

The surgeon, M. Hirschberg, of Frankfort, died recently, at the age of 67. On his return from the annual meeting of the Gesellschaft für Chirurgie he was attacked with heart failure in the carriage that was taking him home. Hirschberg was a well known surgeon who has shown much scientific activity.

Professor Schutz, director of the pathologic institute at the Berlin veterinary college, celebrated April 16 the semicentennial of his professorship. He is well known in human pathology, especially for work on the etiology of tuberculosis.

Annual Meeting of the German Surgical Society

In Easter week, as usual, the German Roentgen Society, the Orthopedic Society and the German Surgical Society met in Berlin. In addition there occurred this year the first meeting of the Society for the Care of Cripples, which was largely attended by physicians, ministers, teachers and the superintendents of homes for cripples.

Of all these meetings, that of the Gesellschaft für Chirurgie was most interesting. Among the most important subjects there was first the "Surgical Treatment of Epilepsy." The Berlin surgeon, Professor Krause, who is recognized in consequence of wide experience as one of the foremost authorities in the field of surgery of the central nervous system, reported on the non-traumatic form. He based his report on 88 cases which he had treated during the last 8 years. Of these 50 were cases of Jacksonian epilepsy. All cases due to acute infection and to hysteria were excluded from surgical treatment. Only such cases as are due to new formations or occur as a sequel of infantile cerebral paralysis or in which the etiology is doubtful, are suitable for surgical treatment. In all cases of these three groups excision of the focus of the muscle group that is first affected is to be undertaken. The center is to be determined by faradic stimulation of the exposed motor region by long slender electrodes and a current so weak that it produces only sensation but no fibrillary contractions when applied to the tip of the tongue. The extensive paralyses that appear immediately after the operation gradually recede. Krause obtained 5 complete cures and many improvements. In general epilepsy the results were not so favorable. In these cases he made Kocher's operation (formation of a valve —*Ventilbildung*). Professor Tilmann of Cologne advised primary trephining at the point of injury in the treatment of traumatic epilepsy. He operates always in one stage. In his 26 cases 60 per cent. of the patients were cured, 10 per cent. improved, and 7 per cent. died. In the discussion Professor Garrè (Bonn) warned against too early recourse to operation in genuine epilepsy, lest the operation fall into disrepute. Only such cases should be submitted to operation as have withstood all the resources of internal therapy. Professor Braun (Göttingen) reported a case of traumatic epilepsy in which the patient was operated on by removal of part of the cortex twenty years ago and has since remained well. He recommends caution in the interpretation of successes after operation on account of the possibility of spontaneous improvement and cure.

Professor W. A. Freund, formerly director of the gynecologic clinic at Strasburg, now of Berlin, discussed the "Surgical Treatment of Stenosis and Rigid Dilatation of the Thorax." Both these deformities of the thorax occur as primary affections and produce injurious effects on the lungs. The first deformity is attributable to an arrest of development of the left costal cartilages. The result of this is a functional disturbance and change of form in the apex of the lung which invite the tubercle bacilli to settle there. Changes in the costal cartilage are also the cause of rigid dilatation of the entire thorax. Pulmonary emphysema is brought on by the position of the thorax in inspiration produced in this way. Not every tuberculosis of the lung nor every case of emphysema, however, is to be attributed to a primary deformity of the chest. The operative mobilization of the upper opening of the chest by excision of a piece of the cartilage of the first rib, imitating the mobilization which sometimes occurs spontaneously, produces a change in the apex of the lung and makes the cure of tuberculosis possible. The operation should

be made only in case the tuberculous affection does not extend below the cartilage of the second rib. For mobilization of a rigid thorax, resection of pieces of the costal cartilages from the second to the fifth is recommended; but this chondrotomy is only indicated when atrophy of the lungs and of the diaphragm has not occurred as a result of the emphysema. The determination of the latter condition is possible according to the investigations of Professor Mohr (Halle), by ordinary clinical methods, including *x*-ray examination and spirometry. The forms of rigid thorax occurring in consequence of muscular spasm, as in the paralytic thorax and in the aged, should not be operated on. Bronchitis and bronchial asthma furnish no contraindication, but the contrary is true of disturbances in the circulation which cannot be removed by internal remedies. The operation should, moreover, be undertaken only in case the rigidity is of a really high grade.

Von den Velden (Düsseldorf) reported 10 operations for rigid dilatation of the thorax. Pieces of the cartilages of the second to the fifth rib were removed from the right side. The immediate result was striking in all cases and the permanent results were entirely satisfactory. Bronchitis was cured, the lung capacity increased at least 600 c.c., cyanosis disappeared, and even dilatation of the right heart was diminished. Seidel (Dresden), Friedrich (Marburg) and Stieda (Halle) reported permanent successes; other surgeons have had less favorable results.

The operation for appendicitis also received attention at this meeting. Professor Kümmell of Hamburg emphasized the fact that in opposition to the late attempt by Sonnenburg to treat beginning appendicitis in a more conservative manner, the surgical stand for early operation must be decisively maintained. It is not possible to draw a certain conclusion as to the pathologic process in the appendix from the symptoms present in the beginning of the affection or to make a correct prognosis in the early stage. Neither the leucocytosis nor the viscosity of the blood nor Arneth's blood picture permit a certain prognosis at an early stage. Kümmell warns, with especial earnestness, against the treatment by castor oil, recently reintroduced by Sonnenburg in the beginning of appendicitis. In a large series of cases he had found only 0.5 per cent. mortality after early operation, but the entire mortality of interval operations, if abscesses and peritonitis are included, rises to 6 per cent. The danger of interval operation is underestimated by practitioners. The mortality in case of abscess and peritonitis amounts to 20 per cent. Sonnenburg gave great weight to the prognostic importance of the leucocytes, not so much the absolute number as the distribution of the individual forms outside of the blood. The higher the relative number of mononuclear leucocytes the more unfavorable are the chances for the system. Only from a study of these biologic conditions and by a control of his views in many cases of mild appendicitis had he given castor oil in the expectant cases. He had no intention of introducing a new general treatment for acute appendicitis. As a practicing surgeon he advocated unconditionally the early operation. The justification of his trials in the hospitals is furnished by the fact that the mortality in his institution is not higher than that in other places. Professor Kocher of Bern agreed in all points with the views of Kümmell. According to his experience Arneth's blood formula gives no information so long as the disease is confined to the appendix itself. It is decisive only when the affection has become more extensive and then the most favorable time for operation has already passed. The other speakers expressed the same views so that the president of the congress, Professor Bier, was able to determine at the close of the debate that in this important question of early operation there was absolute unanimity in the position of surgeons.

In the treatment of "Tuberculosis of the Peritoneum" Professor Friedrich (Marburg) on the ground of experimental investigations, had injected into the peritoneal cavity as much as 20 c.c. of official glycerin in children, in adults as much as 40 c.c. and repeated the injection as many as eight times. His impression was that the course of the disease was very favorably influenced. The tuberculin treatment was very warmly recommended by others. Professor König (Altona) and Hohmeyer made a report on the present status of spinal anesthesia on the basis of a collective inquiry among leading German surgeons. Half of the German surgeons who have employed it no longer use it. In 2,400 cases which are included in the report, stovain, tropacocain and novocain were chiefly used. Side effects were frequently observed. The speakers came to the conclusion that spinal anesthesia should be employed only when local anesthesia and primary ether anesthesia, the *Aetherrausch*, are not possible and the inhalation method is contraindicated.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 7, 1910.

Women and Children in Factories

The report of the social committee of the Austrian parliament has been now issued; the part dealing with the work done by women and children is very interesting. About 39 per cent. of all the school children are employed in household or factory industries. The country school children are much oftener made laborers at an early age than those residing in cities, because the rural population is not so much under supervision as in cities; we have in this country compulsory schools, but the inspectors in the country are sometimes, especially during the summer, very lenient. On the other hand, the lack of laborers is felt more keenly in the country than in towns; the proportion of children's labor must be considered as an exponent of the social standards of the various parts of population. Similarly, factory work done by women is a proof of the degree of social development. The Austrian law now prescribes that night work must not be done by girls under 18; formerly the limit of age was 16. Even then females are to be kept away as much as possible from work of this kind unless necessity (accidents, war, abnormal weather) compels it. In each instance the inspector of labor must be informed of the fact, and if such employment exceed two weeks the magistrates must give their written permission, for a period not exceeding forty days in the year. In seasonal work only sixty days may be permitted. A woman past the fifth month of pregnancy may under no circumstances be employed at night work, nor any woman who has a child less than two months old.

Conference on the Care of the Feeble-Minded

The fourth meeting of the Austrian Society for the Care of the Feeble-Minded was held a few days ago in Vienna, and was very interesting, being composed of all classes of persons engaged in practical and theoretical work of this kind—medical men, teachers, inspectors of schools, and special tutors. The necessity of special institutions for feeble-minded persons was recognized in this country not longer than twenty-five years ago. Since then philanthropists and magistrates have erected one or more institutions of this kind in nearly every capital city of the Austrian states. More than 50 per cent. of all children who were inmates of such institutes twenty-five to fifteen years ago, have become fit for a lunatic asylum or are certified lunatics under family care. Only 20 per cent. of all feeble-minded persons, who have received special instruction, are able to earn part of their living and thus to lessen the burden of their family. Nearly all the other 30 per cent. perished before attaining the age of 35. The blind, the deaf-mute and the crippled were also considered in the proceedings of the congress. There are in Austria all together eight large institutions for deaf-mute children, and the teaching is oral, without exception; the results are as a rule excellent as regards the possibility of keeping up a conversation, and several pupils of these schools have been able to attain good positions in social or commercial life. They are not feeble-minded; nor could the blind be included logically among the subjects of the conference, but they were considered.

Prof. von Wagner read a paper on his method of treating idiots with extract of thyroid. There are in certain Austrian mountain districts colonies of these unhappy individuals. The professor has been appointed by the government to investigate the problem, and by giving the thyroid extract, it has been possible to improve the mental activity, the growth and general health of 80 per cent. of all idiots in this country. In children, an increase of the height by 2 to 5 inches within one year, with a striking gain in intelligence was observed nearly without exception. Prof. von Wagner recommended the use of thyroid in all cases of feeble-mindedness of uncertain etiology.

Lunatics and Political Difficulties

The political difficulties of the government in Bohemia have led to a curious result in the Bohemian lunatic asylums. As there was no budget granted in this country, the expenditures to be controlled by the budget cannot be made. All grants to medical institutes, all public buildings had to be stopped, and all patients paid for by the Bohemian revenue have had to be recalled from the hospitals. Among them were 820 lunatics, who were dismissed from asylums, in order to save expenses. This grotesque act, rather satirical than humorous, is perhaps meant only to bring the political parties to their senses. But at all events the danger of releasing insane persons has caused tremendous indignation all over the country, especially in medical circles, and the Diet of Bohemia is bitterly blamed for such an absurd decision.

Pharmacology

REVISION OF THE PHARMACOPEIA

Preliminary Report from the Committee of the Section on Obstetrics and Diseases of Women

On Dec. 19, 1909, Dr. John G. Clarke, Chairman of the Section on Obstetrics and Diseases of Women of the American Medical Association, appointed the undersigned committee to suggest such changes in the Pharmacopeia, as the experience of gynecologists and obstetricians throughout the country would seem to justify. The following preliminary report of the results of our investigation are now presented in order that the information gained may be utilized at the meeting of the Pharmacopeial Convention, held May 10, at Washington. The final report will be submitted to the members of the Section, at the regular meeting of the Association in Saint Louis, June 7.

In order that the recommendation of this committee might go to the Pharmacopeial Convention, not merely as the opinion of one or two members but as an expression of the approval or dissent of several hundred members of this Section, it was decided to employ the return-postal ballot to find out what was the opinion of the majority. Through the generosity of THE JOURNAL of the American Medical Association the necessary printing and mailing was done without any expense to the Section. In order that all the members might vote with an intelligent understanding of the important points involved, there was sent to each member the following circular:

"As a member of this Section you are asked to express your opinion regarding the advisability of admitting certain preparations more generally used in the practice of your specialty into the 1910 revision of the U. S. Pharmacopeia. The special committee, appointed by our chairman, Dr. John G. Clarke, to consider the subject of these proposed changes, has deemed it best to take a vote of the members of the Section on the important points involved before March 25, so that the report can go to the Pharmacopeial Convention in May as expressing in great part the opinion of this Section.

"If this were not done and the report not submitted until the regular meeting of this Section in June, its influence on the Pharmacopeial Convention would be lost. It would be manifestly unjust and unwise to include in our Pharmacopeia any preparation whose name is trademarked or whose mode of manufacturing is patented. To obviate this very serious drawback in our copyright laws, we must employ the expediency of introducing these substances into the Pharmacopeia under new names.

"Your committee has therefore deemed it wise for you to express your opinion, not, for instance, on the relative merits of ergone, ergotol, ernutin, etc., but on the desirability of a purified concentrated preparation of ergot. If the physicians of the country think such a preparation a necessity, it becomes the duty of the committee on Revision of the Pharmacopeia to suggest a method of manufacture, standard tests, and a suitable name. What applies to ergot is true of the other six preparations concerning which you are asked to express your opinion. The technical difficulties regarding an accurate method of standardization can be safely left to the Committee on Revision. What your committee desires to know is which of these preparations have so far proved their usefulness as to justify inclusion in the Pharmacopeia.

"Your vote can readily be expressed on the enclosed postal card as directed. Please return it at once, so that the vote may be as complete as possible."

This circular was enclosed in an envelope, together with a post card addressed to the chairman of the committee, on the back of which was printed the following:

Do you favor the introduction into the next Pharmacopeia of the following. Indicate YES or NO by a cross (X):

YES NO 1. A purified concentrated preparation of ergot for hypodermic use (such as ernutin, ergone, etc.).

YES NO 2. A non-irritating silver solution (such as argyrol, protargol, etc.).

YES NO 3. A liquid preparation of the adrenal gland (such as adrenalin, adrin, etc.).

YES NO 4. A preparation of cotarnin (such as stypticin, styptol, etc.).

YES NO 5. A less toxic form of cocain (such as eucain, novocain, stovain, etc.).

YES NO 6. An extract of ovarian tissue and of the corpus luteum (such as lutein, etc.).

YES NO 7. A counter-irritant preparation similar to ammonium ichthyol-sulphonate (ichthyol).

YES NO 8. Do you favor a simplified name for hexamethylenamin (hexamin)?

Do you favor retention of the following preparations found in the 1900 Pharmacopeia? Specify by a cross (X) which you would retain: Gossypii cortex, viburnum prunifolium, viburnum opulus, cerii oxalas, glyceritum hydrastis, zea, uva ursi, hedeoma, oleum hedeomæ, vinum ergotæ.

Owing to the large number of members of this Section THE JOURNAL felt that it would suffice to send the circular and postal card, to every other member on the list of membership. Of the 500 communications thus sent out, replies were received from 196. The interest shown in the subject is indicated, not merely by the number of replies, but by the care taken in the consideration of each special topic brought up for discussion. In many instances, the vote was not merely expressed by "yes" or "no," but by additional comments. An analysis of the vote cast follows:

1. A purified concentrated preparation of ergot for hypodermic use.

The vote on this question was, 182 yes; 13 no; not voting, 1. Which one of the various methods in isolating the active principle of ergot will prove to be best is a question to be determined by the members of the Committee on Revision. The essential thing is that the preparation shall be free from inactive or irritating substances; that it should be aseptic and concentrated, so as to be suitable for hypodermic use, and that physiologic standards should be required to test its efficiency.

2. A non-irritating silver solution. The vote was 186 yes, 7 no, and 3 not voting. The irritation caused by the injection of silver nitrate in cases of cystitis, and in the prophylactic measures employed against ophthalmia of the new-born has led practitioners to favor the less irritating silver solutions, such as argyrol, argentamin, etc. It would seem that considerable difficulty will be found in establishing accurate chemical tests for the proper manufacture of such a preparation of silver, but that it is wanted by the profession is clearly shown by the vote.

3. A liquid preparation of the adrenal gland. The vote was 185 in favor, 5 against, and 6 not voting. Physiologic tests will be required to determine the efficacy of this product also.

4. A preparation of cotarnin. The fact that 31 of the replies left this question unanswered would indicate that a considerable percentage of the profession is still ignorant of its value as a uterine hemostatic. Nevertheless, the fact that of the remaining 165 votes, 123 favored the introduction of this substance into the Pharmacopeia, and only 42 opposed it, would justify its recommendation by the committee.

5. A less toxic form of cocain. There seemed to be practical unanimity of opinion regarding this substance. One hundred and seventy-six favored its introduction, 12 opposed it, and 8 did not vote. The great number of preparations of this sort that have been put on the market justify the belief that some equally good method of isolating a less toxic form of cocain, can be worked out by the Committee on Revision. It is hoped that, in naming this substance, a short synonym will be provided, in order to facilitate its competition with the proprietary substances already on the market.

6. An extract of ovarian tissue and of the corpus luteum. Of all the substances submitted to vote, this was the only one that failed to secure more than a bare majority. There were 99 voting yes, 67 voting no, and 28 not voting. If the Pharmacopeia is to include only these drugs that have the unequivocal indorsement of the profession, we are not justified, from the vote, in recommending the inclusion of an ovarian extract into the Pharmacopeia. It is probable that in the next five or ten years, our knowledge of the manufacture and physiologic action of these organic extracts may be so much improved as to justify their admission into the Pharmacopeia, but for the present we ought to assume a conservative standpoint.

7. A counter-irritant preparation similar to ammonium ichthyol-sulphonate. The vote stood, 166 yes, 19 no, and not

voting 8. There seems to be no reason why this substance should not be admitted to the Pharmacopeia, as its use in gynecology, as well as in other conditions, has been sufficiently demonstrated. Owing to the copyright laws in this country, it would not be advisable to introduce the substance into the Pharmacopeia under its ordinary name of ichthyol. The chemical name, on the other hand, is too cumbersome for the practitioner's use. We trust that some simple synonym, of not over three syllables, will be adopted.

8. A simplified name for hexamethylenamin. One hundred and eighty-one favored a simplification, 9 opposed it, and 6 did not vote on this question. The nomenclature of substances in the Pharmacopeia is of considerable importance. It should serve two purposes: one, to indicate the correct chemical composition of the preparation, as nearly as possible; the other, to give a short easily remembered name, for everyday use, by the practitioner. These abbreviations of chemical terms should not, as in the case of hexamethylene tetramine, consist merely of the elimination of two syllables ("tetra"), but the name should be cut down to such a simple form as "hexamin," even if, chemically, such an appellation means little or nothing. If the U. S. Pharmacopeia is to compete with proprietary medicines, its terminology must be simplified for use by the busy general practitioner.

Ten substances in the Pharmacopeia, primarily used by gynecologists, were placed on the postal card ballot, with the view of determining whether they should be retained in the next edition of that book. The vote on these ten products was as follows:

1. Hedeoma.—The vote was 179 in favor of exclusion, 17 of retention.
2. Oleum hedeomæ.—The vote was 179 to exclude it and 17 to retain.
3. Vinum ergotæ.—The vote was 173 to exclude it and 23 to retain it.
4. Zea.—The vote was 171 to exclude it, 25 to retain it.
5. Gossypii cortex.—The vote was 154 to exclude it, 42 to retain it.
6. Glyceritum hydrastis.—The vote was 137 to exclude it, 59 to retain it.
7. Viburnum opulus.—The vote was 128 to exclude it, 68 to retain it.
8. Uva ursi.—The vote was 118 to exclude it, 78 to retain it.
9. Cerii oxalas.—The vote was 79 to exclude it, 117 to retain it.
10. Viburnum prunifolium.—The vote was 71 to exclude it, 125 to retain it.

There can be no question that physicians, as a whole, do not use the first five of these preparations enough to justify their retention in the Pharmacopeia, and likewise no question but that cerium oxalate, and viburnum prunifolium apparently give results in the hands of many physicians, so that they should be retained. What disposition should be made of the remaining three preparations (glyceritum hydrastis, uva ursi, and viburnum opulus), may be left to the discretion of the Committee on Revision.

FRED J. TAUSSIG, Chairman.
HENRY T. BYFORD.
GUY L. HUNNER.

PHENOLPHTHALEIN

Phenolphthalein has long been used as an indicator in chemical reactions, but its use as a therapeutic agent[1] is comparatively new. When its laxative properties were first discovered it was exploited as a proprietary in Germany, and it was not long before the enterprising manufacturers in this country saw in it a potential gold mine and now nearly every proprietary drug manufacturer in this country has coined a proprietary name for it and is exploiting it, either alone or in combination with one or more other laxatives, and with more or less unwarranted claims.

Phenolphthalein itself has certain pretty well defined properties, but when a little of some other drug has been added wonderful therapeutic possibilities are claimed for the combination. The drug also has a definite market value and the pure substance in the form of powder, tablets or pills could not be sold at a price greatly in excess of the market value. Thus manufacturers, from business policy, add to it other drugs.

There are now on the market numerous more or less secret and "fancy" preparations of phenolphthalein for which a price is charged out of all proportion to the value of the preparation. Among these are Phenolphthalein Laxative (El Zernac Co.), Exurgine (sold by Bischoff & Co.), Probilin (Schering & Glatz), Prunoids (Sultan Drug Co.), Laxine (Columbus Pharmacal Co.), Phenolax Wafers (Upjohn Co.), Laxaphen (Parke, Davis & Co.), Phenalein (Pax Chemical Co.), Thalosen (Abbott Alkaloidal Co.), Laxothalen Tablets (Pitman-Myers Co.), Veracolate (The Marey Co.) and a number of others, perhaps. And additional preparations are still coming out.

Some of the preparations contain only the phenolphthalein with a coined non-descriptive proprietary name attached, but most of them contain in addition one or more of such drugs as cascara, sulphur, prune, senna, salicylic acid, ipecac and aromatics. The exploitation of phenolphthalein in this way gives opportunity to the manufacturers to make all sorts of strong claims, some of them directly contradictory, for their preparations. For instance, Phenolax, which is said to contain phenolphthalein and cane sugar, is claimed to be "a great success for all forms of constipation, intestinal atony and hepatic torpor." Of Laxothalen, which is said to contain phenolphthalein, aromatics and sugar, it is stated that "its action is confined to the bowel and it has practically no hepatic action." Of Prunoids, which is said to contain phenolphthalein, cascara, de-emetized ipecac and prunes, we have the old familiar statement that "the harmonious blending of the several ingredients will give results that cannot be obtained through their use separately, nor will their use be followed by after-constipation."

At the time phenolphthalein was beginning to be exploited in this country THE JOURNAL[2] suggested that physicians who wished to try the remedy should prescribe it under its own name and not under fancy, coined names. Since phenolphthalein occurs in the form of an insoluble and tasteless powder there is no reason why special pharmaceutical preparations of it should be placed on the market. It can be prescribed in powder form, in pills, capsules or tablets. Thus given, the true therapeutic action of the drug would be apparent and its actual value arrived at.

The vice of this unscientific habit of prescribing names instead of drugs is stated in a forcible way in a letter received from Dr. V. E. Simpson, a teacher of materia medica and therapeutics in the medical department of the University of Louisville. He says:

"Recently P. D. & Co.'s representative left on my desk a sample labeled 'Laxophen.' The formula given is: phenolphthalein, gr. viii; salicylic acid, gr. 3/5, in each fluid ounce, 'incorporated in a palatable chocolate base.' Now, in the first place, this name is one that the public will easily learn and will soon call for; in the second place, it is not a name that carries with it even a suggestion of its contents; and, finally, the physician acquires the habit of mechanically prescribing names instead of drugs, and in the burdening of his memory with the myriad of fantastic labelings he finds it impossible to remember even the drugs any one contains, much less the exact proportions of those drugs. Then suppose that a consultation is had; the consultant asks what is being given and the attendant answers that he is giving 'laxophen.' The consultant, perhaps, has not been sampled and inquires about it; the attendant must answer, 'Oh, it contains some phenolphthalein and a salicylate, but I have forgotten the exact proportions. I have the literature on my desk. Had he used U. S. P. and N. F. remedies, which the consultant and every other doctor in the land has access to and should have some knowledge of, this embarrassment would not occur.'"

All of the above should remind the physician that he should write simple prescriptions, for drugs whose action he knows,

1. Those who wish to study the action and use of this drug further will find references to articles in THE JOURNAL as follows: THE JOURNAL, Jan. 5, 1907, pp. 64 and 70; March 30, 1907, p. 1133; April 20, 1907, p. 1351; Nov. 21, 1908, p. 1782; Nov. 28, 1908, p. 1886. The first page mentioned discusses the introduction of phenolphthalein into medicine.

2. THE JOURNAL, March 30, 1907, p. 1133.

adapted to the particular case and not the money-making combinations under fanciful, non-descriptive names exploited by the proprietary manufacturers. In this way he will not only save money for himself and his patients, but he will be giving them exact and effective treatment, he will know exactly what he is giving and learn for himself its effect, and he will be following the only method which entitles him to be called a scientific physician.

Correspondence

The Careless and Criminal Use of the Mercuric Chlorid Tablet

To the Editor:—The report in THE JOURNAL, April 9, of a peculiar case of mercurial poisoning prompts me to make this communication. Such cases are not so uncommon as Dr. Lankford thinks. The use of these tablets has become common and druggists sell them without observing the requirements of the law as to the sale of poisons.

Several years ago a girl was given these tablets by her physician for a vaginal wash, with oral instructions as to their use. She ignorantly inserted a 7½ grain tablet into the vagina. As she suffered great pain, another physician was called in, who finding the cause, used local washes to allay the effects. Later, symptoms of mercurial poisoning developed. I then came into the case and attended the patient until she died some two weeks later. The case pursued the course so well described by Dr. Lankford. Last year a young farmer from an adjacent county came here with his bride. He procured a supply of "antiseptic" tablets from a druggist of his county and after intercourse with the young wife placed a tablet in the vagina. Result, death some ten days after in one of our hospitals. The husband was indicted for murder, convicted of involuntary manslaughter, and is serving out his time in jail. In his testimony he said that he and the girl had been having illicit intercourse for some time and that they had been using some kind of antiseptic tablet to prevent pregnancy and that he was ignorant of the difference between the two kinds.

A druggist told me that he had seen reports of several such cases in his journals. A married patient consulted me about using a wash recommended to her by one of her friends to prevent conception. To my astonishment she brought out an unbroken bottle of 7½ grain antiseptic bichlorid of mercury tablets containing several hundred. How or where she procured them I did not learn. After my talk to her, however, she did not use them.

A young man visiting in the city at the annual encampment of one of the semimilitary orders, procured at a drug-store some "blue" tablets to use after a visit in the red light district; also some migrain tablets for a headache, from which he was suffering. He carelessly took the blue tablet; prompt attention at the drug-store by one of our physicians saved him. While he was being treated in the rear of the store another young man of the same order entered in front to get blue tablets for similar uses, but he failed to get them. I know of one case of fatal mercurial poisoning from long-continued bichlorid vaginal douches, ordered by a surgeon and kept up by the patient's family physician.

Doubtless there are many cases in which the bichlorid "blue" tablets are kept near the fountain syringe for use to prevent conception. So it behooves physicians and druggists to exercise caution as to prescribing and dispensing these very actively poisonous but innocent looking tablets.

W. H. SHARP, Parkersburg, W. Va.

A Proposed Section on Genito-Urinary and Venereal Diseases

To the Editor:—While attending the last meeting of the American Medical Association at Atlantic City I presented a resolution, which had previously been unanimously passed by my state society, requesting the House of Delegates to organize a new section to be known as the Section on Genito-Urinary and Venereal Diseases. I briefly enumerated then the reasons for the organization of this section. I shall recapitulate a few of the most important reasons. At present anyone presenting a paper on a genito-urinary subject might be assigned to the Section on Surgery, where we all know it would receive rather an indifferent reception. One presenting a paper on syphilis would be assigned to the Section on Dermatology. At the last meeting the Section on Cutaneous Medicine and Surgery changed its name to Section on Dermatology; hence a close demarcation in classification would naturally exclude syphilis, as syphilis is not a skin disease exclusively just because it has a skin manifestation, any more than it is a nervous disease because it is an etiologic factor in producing paresis and locomotor ataxia. Syphilis is a disease of the whole organism and no cell in the body enjoys immunity from its attack. I consider genito-urinary diseases and syphilis more closely allied than are skin diseases and syphilis, as genito-urinary specialists as a rule treat more syphilis than do dermatologists. The laity classify genito-urinary diseases and syphilis together, and therefore they call on the genito-urinary specialists, and not the dermatologists, when afflicted with any venereal disease. Our standard American text-books on the subject, such as White and Martin, Taylor, Keys, etc., include genito-urinary diseases and syphilis, and these authors are the ones that are more frequently quoted as authority on syphilis than any of our dermatologists. This same rule holds good with most of the European authorities.

When I presented my resolution it was referred to the Committee on Sections, and here it met with opposition from the Section on Cutaneous Diseases and Surgery and the American Urological Association. The latter was a surprise. The Section on Cutaneous Diseases and Surgery thought that the Section on Genito-Urinary Diseases and Venereal Diseases would take syphilis away from their section, when on reflection, they might know, they can go on in either section and have as many papers on syphilis as desired, the two sections would not conflict at all. The Section on Nervous and Mental Diseases last year had a symposium on the new pathology of syphilis. Syphilis is a disease that can be discussed in any section of the American Medical Association, as it does not belong exclusively to any one. The American Urological Association thought that the section was intended to disrupt that society and it made such a bitter protest that in the interest of peace and harmony it was invited to come in as a body and participate in the transactions of this new section, but it passed a resolution rejecting the offer. As the American Urological Association is an independent organization, and in no way related to the American Medical Association, it has no right to dictate what section should exist in the American Medical Association. Furthermore, the American Urological Society is purely, as its name implies, a urological society, and will not allow any papers on its program that take up the discussion of the genital portion of the urinary tract, such as an article on any genito-urinary disease of gonorrheal origin. The papers as a rule consist of articles on the capital surgery of the kidneys, prostate and bladder, whereas an average genito-urinary specialist has several hundred cases of the minor genito-urinary diseases in his office work to one of a capital nature.

The section I desire to be organized is to be more strictly a section for the study of genito-urinary and venereal diseases, such as diseases of the spermatic cord, prostate, urethra, external and internal genitals, whether of gonorrheal origin or from any other cause. Possibly the term "andrology" would be appropriate and more acceptable to some. The work in this section would in no way conflict with the American Urological Association or the Section on Dermatology, but would encompass a class of diseases that would be of interest to the genito-urinary specialists and of great interest to the general practitioner, as they frequently meet this class of diseases in daily practice. It is not my object to create any antagonism and I think that after mature reflection the members of the American Medical Association will see that such a section can be organized without antagonizing any other section and be productive of excellent work.

The committee last year returned the resolution to the House of Delegates, which approved it, stating that if one hundred members would sign a petition requesting the organ-

ization of such a section the section would be created. As I was a member of the House of Delegates and will be again this year at the coming meeting in St. Louis, I wish to present the resolution again for approval and desire the support of all members of the American Medical Association who are interested. I therefore ask all members who are in favor to write me in the following form:

To the Hon. House of Delegates:

I hereby approve of the organization of a new section to be created in the American Medical Association, to be known as the Section on Genito-Urinary and Venereal Diseases and pray you will organize such a section at your next meeting in St. Louis, June, 1910. If such a section is organized I will give it my support.

Name.....
City.....
County.....
State.....

I shall appreciate receipt of these by return mail, so I can attach the replies to my petition to be presented to the House of Delegates at the coming meeting in St. Louis, in June.

EUGENE CARSON HAY, Hot Springs, Ark.

102 Exchange Street.

A Proposed Section on Physical Forces in Medicine and Surgery

To the Editor:—A petition will be presented to the House of Delegates at the St. Louis session asking that a section be created in which the physical forces, of whatever nature, in their relations to medicine and surgery, may have adequate opportunities for presentation and discussion. This petition has already been largely signed. As the time available to secure additional signatures is now short I would like those in sympathy with this movement to write to me, or to Dr. William S. Newcomet, 3501 Baring street, Philadelphia, at once, stating their interest in the matter and promising to support the section if formed, and these letters will be added to the petition. G. BETTON MASSEY, Philadelphia.

1801 Chestnut Street.

Finger-Nail Palpation

To the Editor:—I have practiced for several years past the method of perpendicular nail palpation of artery walls accredited to Wertheim-Salomonson in THE JOURNAL, April 16, page 1345. I consider it far more satisfactory and accurate than the usual method of palpating with the pulp of the fingers, and especially so in deep-seated or slightly hardened arteries, and to make sure when there is no hardening present.

W. F. ROCHELLE, Jackson, Tenn.

Book Notices

DISEASES OF GENITOURINARY ORGANS. Considered from a Medical and Surgical Standpoint, Including a Description of Gonorrhea in the Female and Conditions Peculiar to the Fmale Urinary Organs. By Edward L. Keyes, Jr., M.D., Clinical Professor of Genitourinary Surgery, New York Polyclinic Medical School. Cloth. Price, $6. Pp. 975, with 195 illustrations. New York: D. Appleton & Co., 1910.

This is practically a new work and embodies what has been proved reliable of the newer technic of the last few years. Operative procedures are grouped in a separate chapter and are described in an excellent manner. There is a chapter on the care and sterilization of various instruments, and the book throughout emphasizes the necessity of acquiring a true aseptic conscience, which is unfortunately still too rare among men handling pus cases. The importance of thorough, systematic and careful examination is emphasized and special attention paid to the laboratory side of diagnosis. Dr. Keyes makes a plea not only for an etiologic diagnosis, but for an exact, localizing, anatomic one as well. In discussing treatment a nice sense of discrimination is shown and principles are taught that can be easily followed.

There is a chapter on syphilis which is out of place in a work of this sort; also one on chancre and one on chancroid. Methods for determining the renal function are compared and the results analyzed, the phloridzin test and the importance of urea are emphasized. Gonorrhea is discussed from every angle—its social aspects, prophylaxis, relation to marriage, its real gravity, and remedies to limit its spread. There is also included a chapter on gonorrhea in women, which is a welcome addition. Stock vaccine is recommended in treatment, especially in cases complicated by epididymitis. The extragenital complications are briefly described, but arthritis should have been more fully gone into. Prostatitis, vesiculitis, stricture, stone, tuberculosis, are all treated in an excellent manner. Nephrectomy is advocated as the ideal treatment for renal tuberculosis, but in the epididymal infection expectant or palliative treatment is the plan to be followed. Epididymectomy may have to be performed, but rarely castration.

The illustrations are for the most part good, but those illustrating the passage of sounds are poor. There should have been more of them and more explicit directions with each picture.

The book is concise and free from padding. It covers the field of genitourinary diseases as nearly as any one work can, is lucid and up to date and has a smooth, readable style. It is an excellent book in every way.

SERUM DIAGNOSIS OF SYPHILIS AND THE BUTYRIC ACID TEST FOR SYPHILIS. By Hideyo Noguchi, M.D., Associate Member of the Rockefeller Institute for Medical Research, New York. Cloth. Price, $2 net. Pp. 173, with 14 illustrations. Philadelphia: J. B. Lippincott Co., 1910.

In this book the author treats the serum diagnosis of syphilis with a special view to the needs of laboratory workers, physicians and students. For this purpose he gives, first, a careful account of the essential facts in regard to hemolysis by serum and then of the power of combination of antigens and antibodies to fix complement and in that way to prevent hemolysis. The explanation, step by step, of complement-fixation on which the Wassermann test and all its variants are based is admirably clear and precise. The technical details of the Wassermann method and of the method recommended by the author (Noguchi's modification) are given with painstaking accuracy, and various phases of the tests are illustrated by ingenious diagrams that will serve to facilitate the comprehension of the tests by the uninitiated. The author does not permit himself to wander off into theoretical discussions. Even the surprising fact that various non-specific substances may take the part of antigen, quite as well as extracts of syphilitic liver, thereby upsetting to a degree the theoretical considerations on which the test is based, precipitates only the suggestion that these non-specific substances play an intermediating rôle between the real syphilis antigen and antibody present in syphilitic serum. The now well-established diagnostic value of the Wassermann reaction is shown by means of tabulations of the results obtained by various investigators. The last chapter is devoted to the author's butyric acid test for syphilis. There is an extensive bibliography and also a useful glossary of the terms commonly employed in discussions of immunity. The book fills a need and fills it well; it will be of great use to all who are interested in the serum diagnosis of syphilis.

MINOR OPHTHALMIC AND AURAL TECHNIQUE. By Alfred Nicholas Murray, M.D., Chicago, Assistant in the Department of Otology and Laryngology, Rush Medical College. Cloth. Pp. 233, with 98 illustrations. Price, $3.00. Chicago: Cleveland Press, 1909.

The author of this book is to be congratulated on the happy manner in which he has arranged, in so concise a form, the many elementary and useful hints on the eye and ear for the student in medicine. The great majority of practitioners have never had, and many students are not now getting, the training in ophthalmology and otology that they ought to get; consequently one must welcome every effort to help. We can scarcely forgive the author for using illustrations so poorly done as Figs. 8, 15, 19, etc., in this age of splendid art work, when semidiagrammatic illustrations would do so much better. The few words on anatomy and physiology could well be dispensed with, and a few references to works on the subject substituted. Although this work is classified as an elementary book, such diseases as gonorrheal ophthalmia and ophthalmia neonatorum are not given the attention which their importance demands. The treatment given is altogether too meager for any book whose pretensions are beyond those of a quiz compend. Two

pages on eye-strain and ocular headaches is a decided slight to these distressing conditions, when six pages are devoted to an appendix on eye instruments. A reversal of this allowance would be more in keeping with what the reviewer takes to be the object of the volume. Diagram 65 is incomprehensible to any but an expert, and the illustrations of the malleus, incus and stapes are not what one has a right to expect when good ones can be had for the asking. No mention is made as to the use of the ophthalmoscope in general medicine, which is a very serious omission. The book, however, will be a useful help to the student and busy doctor, neither of whom have time nor perhaps the inclination to consult large works on these subjects.

HANDBOOK OF DISEASES OF THE EAR. For the Use of Students and Practitioners. By Richard Lake, F.R.C.S., England, Surgeon, Diseases of Ear, etc., London School of Clinical Medicine. Third Edition. Cloth. Price, $2.75 net. Pp. 238, with 66 illustrations. New York: William Wood & Company, 1910.

In the diagnosis, prognosis and treatment of diseases of the middle and internal ear and the mastoid a complete and accurate history of the patient is of greater importance, perhaps, than in diseases of almost any other anatomic structure or function. In this handbook, after giving a brief description of the more important anatomic points, Lake lays emphasis on the points to be brought out in the history-taking, and then describes special symptoms and their import, the bearing of nasal disease on aural disease and the function of hearing, gives in a clear manner the methods of testing the acuteness of hearing and describes the instruments used for this purpose and for the examination of the ear in general. The diseases of the ear and the possible intracranial complications are then described and the treatment indicated.

The descriptions of the different surgical procedures are given in a separate chapter, the different mastoid operations being especially well treated, as are the operative measures for the improvement of hearing in the chronic troubles, and the management of deaf-mutism. There is a chapter on otosclerosis and one on the influence of diseases of the middle ear on life insurance. The physician who expects to do operating in this difficult special field would of course consult larger works and gain experience in hospital, clinical and cadaver work. The book has an index, an appendix contains formulas for various solutions, powders, ointments, etc., to be used in ear diseases, numerous helpful illustrations, beside four colored plates showing numerous views of the tympanic membrane in various middle ear conditions.

A SYSTEM OF CLINICAL MEDICINE. Dealing with the Diagnosis, Prognosis and Treatment of Disease, for Students and Practitioners. By Thomas D. Savill, M.D., Physician to West End Hospital for Disease of Nervous System. Second edition revised by the author, assisted by Frederick S. Langmead, M.D., Casualty Physician to St. Mary's Hospital, and Agnes F. Savill, M.D., Casualty Physician to St. John's Hospital for Diseases of the Skin. Cloth. Price, 87. Pp. 963, with 172 illustrations. New York: Longmans, Green & Co., 1909.

The first edition of this book, in two volumes, was printed in 1903 and reviewed in THE JOURNAL at that time. This edtion is in one volume but contains about the same amount of material as the first. Since the two editions come so far apart, many changes were required by the rapid advances in medicine. The author has attempted to make these changes, but he admits that he has not given as much time to the revision as could be wished. In some respects the book shows this lack, as many articles no doubt might have been rewritten with advantage to eliminate dead timber and such designations as acute and chronic dyspepsia or gastritis, gastralgia, etc., terms which are still used, while calling attention to the more modern views in regard to gastric diseases. Treatment is given very brief space in most instances, consisting of the most general indications of what may be done. The chapter on nervous diseases is more complete and satisfactory than some others, which is accounted for, perhaps, by the fact that Dr. Savill gives especial attention to nervous diseases in his practice. Recent laboratory methods are sufficiently covered for a work of this kind. The original plan of the book is followed, subjects being approached from the view of symptomatology, symptoms then being traced to their causes, that is, the various diseases. The book is a useful and helpful one for the practitioner and the advanced student.

URGENT SURGERY. By Félix Lejars, Professor Agrégé à la Faculté de Médecine de Paris. Translated from the Sixth French Edition by William S. Dickie, F.R.C.S. Cloth. Pp. 617, with 20 full-page plates and 994 illustrations. Vol. I. Price, $7 net. New York: William Wood & Co., 1910.

It is evidently the author's intention to divest surgery of the terrors it has for the average practitioner—but he is doing so at the expense of results. In the first place, by urgent surgery he does not mean emergency surgery—and to perform all the operations described in this book, years of practice and observation are necessary. Practically every condition for which surgical intervention is called for receives consideration here. The book is, therefore, really a text-book of surgery, written in a most readable style, avoiding all theoretical discussions, giving no bibliography, no description of new and untried methods—merely a discussion of the indications and the technical details. The advice given is good and no fault can be found with the methods described, but it is questionable whether the mere reading of a book will make the general practitioner—for whom it was written—sufficiently proficient to perform a gastro-enterostomy or a hysterectomy or a craniectomy or an esophagotomy.

EXAMINATION OF THE URINE. A Manual for Students and Practitioners. By G. A. DeSantos Saxe, M.D., Instructor in Genito-urinary Surgery, New York Post-Graduate Medical School and Hospital. Second edition. Cloth. Pp. 448, with illustrations. Price, $1.75 net. Philadelphia: W. B. Saunders Company, 1909.

This little manual is essentially technical and will be valuable to the practitioner in his daily routine. It not only tells what to do, but how to do it, and what the findings mean. The clinical aspect of uranalysis is emphasized. Many chapters have been practically rewritten and new subjects have been introduced, such as the pentoses, Cammidge's reaction, methods of preserving and staining urinary sediments, and preparing sediments for bacteriologic examination. New chapters have been added on urethral shreds, vesicular sago-bodies, diabetes, and toxemias of pregnancy, and a concise account of the modern methods of functional renal diagnosis has been incorporated. Plates of the Vogel and indican color scales are inserted in the book.

THE SIMPLE CARBOHYDRATES AND THE GLUCOSIDES. By E. Frankland Armstrong, D.Sc., Associate of the City and Guilds of London Institute. Cloth. Price, $1.20. Pp. 112. New York: Longmans, Green and Co., 1910.

This is one of a series of monographs on biochemistry, edited by R. H. Aders Plimmer and F. G. Hopkins. It is intended to assist the student who wishes to make a thorough study of the carbohydrates and to whom much of the recent literature on the subject is not readily available. It presupposes an acquaintance with the elementary facts and would be difficult reading to one who is not thoroughly acquainted with the theories of modern physical and organic chemistry. The monograph will be of special value to the advanced student of physiologic chemistry and of physiology, but little of its material is at present utilizable by the medical practitioner.

KLINISCHE IMMUNITÄTSLEHRE UND SERODIAGNOSTIK. Ein Lehrbuch für Aerzte. Von Dr. A. Wolff-Eisner. Paper. Price, 3.60 marks. Pp. 186, with 5 illustrations. Jena: Verlag von Gustav Fischer, 1910.

This book has its origin in lectures given by the author to physicians. It emphasizes the clinical and diagnostic importance of the facts of immunology and has but little to say about serum therapy and protective inoculation. Special emphasis is laid on the subject of hypersusceptiblity and on the clinical phenomena ascribed to this state. On the whole, the presentation is rather rough and fragmentary; and whether that is the best form by means of which to try to arouse the interest of "the busy practitioner" in the practical importance of the phenomena of immunity may well be doubted.

HANDBOOK OF THE DISEASES OF THE NOSE AND THROAT. By Eugene S. Yonge, M.D., Physician to the Manchester Hospital for Consumption and Diseases of the Throat. Cloth. Pp. 407, with illustrations. Price, 9 shillings net. Edinburgh: William Green & Sons, 1909.

While the author of this book modestly states that it is intended solely for use in general practice, it is nevertheless a work of interest to the specialist also. The text is concisely written and conveys a fair working basis for the guidance of the general practitioner, though it is to be regretted that the descriptions of operations are not given in more detail. It is illustrated by 52 plates, most of which are excellent and add materially to the value of the text.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

NUMBER OF CRIMINALS, INSANE, ETC., IN INSTITUTIONS IN THE UNITED STATES

To the Editor:—Can you give an approximate estimate of the number of persons in reformatory, penal, idiocy and insane institutions in the United States?

J. H. MACKAY, Norfolk, Neb.

ANSWER.—The above query was referred to the Director of the Bureau of the Census, Hon. E. D. Durand, who replies:

"According to the returns of a census of the insane and feeble-minded in institutions, there were in hospitals of the United States on Dec. 31, 1903, 150,151 insane patients, and during the year 1904 49,622 were admitted and 41,733 were discharged. On page 3 of the report it is stated that the statistics of paupers in almshouses for 1904 give 11,807 inmates as insane; and unquestionably a diligent search would have shown a larger number of insane persons who had not passed into the care of any institution. The figures for Dec. 31, 1903, and for those admitted during the year 1904 are for patients in public and private hospitals treating only the insane or having a separate department for the treatment of this class of patients. In institutions for the feeble-minded there were 14,347 patients on Dec. 31, 1903, and 2,599 were admitted during 1904, while 1,435 were discharged. The term 'discharged' includes those actually discharged and also those who died or were transferred to other institutions.

"Our report on prisoners and juvenile delinquents in institutions shows that there were 81,772 adults in penal institutions of the United States June 30, 1904. These included prisoners in U. S. civil prisons, state prisons and state and county penitentiaries, reformatories for adults, county and municipal jails, prisons and workhouses. Persons imprisoned for debt were not included. On the same date there were 23,034 juvenile delinquents in institutions.

"We shall be pleased to furnish your correspondent with our reports on 'The Insane and Feeble-minded in Institutions' and on 'Prisoners and Juvenile Delinquents in Institutions,' if he would like to have them, on receipt of his request."

The Public Service

Medical Department, U. S. Army

Changes for the week ended April 23, 1910:

Dawe, C. W., 1st lieut., M.R.C., April 14, left Ft. Thomas, Ky., en route to take station at Plattsburg Barracks, N. Y.

Snyder, Craig R., capt., April 14, left Ft. McHenry, Md., on two months' leave of absence.

Graham, George D., dental surgeon, April 14, reported for temporary duty at Ft. Omaha, Neb.

Hughes, Leonard S., M.R.C., granted an extension of leave for one month and ten days.

Birmingham, Henry P., 1st lieut. col.; Gandy, Charles M., lieut. col.; Keller, William L., major, to meet at West Point, N. Y., on May 24, 1910, or as soon thereafter as practicable to make physical examination of cadets.

Carter, Edward C., lieut. col., died April 14, 1910, Army and Navy General Hospital, Hot Springs, Ark.

Sievers, Robert E., 1st lieut., M.R.C., on arrival at San Francisco, from the Philippine Islands, and completion of duty with the 23rd Infantry, will proceed to Ft. Warren, Mass., for duty.

Craig, Charles F., capt., ordered to Ft. Monroe, Va., for the purpose of investigating the water-supply at post, and on completion of this duty to return to his station in this city.

Pinkston, Omar W., capt., granted leave of absence for ten days.

Stark, Alexander N., major, granted leave of absence for fourteen days.

Michie, Henry C., M.R.C., granted leave of absence for two months, on surgeon's certificate of disability.

Koyle, Fred T., M.R.C., on arrival at San Francisco and completion of duty with 23rd Infantry, will proceed to Ft. Screven, Ga., for temporary duty, and on arrival of Major Roderic P. O'Connor, Medical Corps, is relieved from duty at Ft. Screven and authorized to avail himself of the leave of absence heretofore granted him.

Nichols, Henry J., capt., detailed to represent the Medical Department of the Army at the annual meeting of the American Society of Pathologists and Bacterioloists, to be held in Washington, May 3 to 5, 1910.

King, Edgar, 1st lieut., the leave of absence heretofore granted him is extended fifteen days.

Hollingsworth, Robert M., dental surgeon, granted leave of absence for two months.

Medical Corps, U. S. Navy

Changes for the week ended April 23, 1910:

Holcomb, R. C., surgeon, detached from the *Solace* and ordered to the *Delaware*.

Dunbar, A. W., surgeon, ordered to duty at the Naval Dispensary, Washington, D. C.

Pugh, W. S., Jr., P. A. surgeon, detached from the *Tacoma* and ordered home to wait orders.

Baker, M. W., P. A. surgeon, detached from the *Nebraska* and ordered to the *Connecticut*.

Bishop, L. W., P. A. surgeon, detached from the navy yard, New York, and ordered to the *Tacoma*.

Old, E. H. H., P. A. surgeon, detached from the Naval Dispensary, Washington, D. C., and ordered to duty at the Naval Medical School Hospital, Washington, D. C.

Halloway, J. H., P. A. surgeon, detached from the *Connecticut* and ordered to the navy yard, New York.

Riddick, W. J., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *South Carolina*.

Phelps, J. R., asst.-surgeon, detached from the *South Carolina* and ordered to the *Solace*.

Wentworth, A. R., medical inspector, commissioned medical inspector, with the rank of commander, from Feb. 5, 1910.

Cecil, A. B., asst.-surgeon, detached from the *Wisconsin* and ordered to the *Nebraska*.

Geiger, A. J., P. A. surgeon, detached from duty at the Naval Hospital, navy yard, Mare Island, Cal., and ordered to duty at that yard.

Lumsden, C. P., medical inspector, detached from duty at the navy yard and Naval Hospital, Pensacola, Fla., and ordered to the naval recruiting station, Chattanooga, Tenn.

Fitts, H. B., medical inspector, ordered to the navy yard, Pensacola, Fla., and to additional duty at the Naval Hospital at that place.

Edgar, J. M., medical inspector, detached from duty on board the *Connecticut* as fleet surgeon of the Atlantic fleet and ordered to command the Naval Hospital, Boston.

McCormick, A. M. D., surgeon, detached from the *Michigan* and ordered to duty on board the *Connecticut* as fleet surgeon of the Atlantic fleet.

Snyder, J. J., surgeon, detached from the *Rhode Island* and ordered to the *Michigan*.

Rodman, S. S., surgeon, detached from the naval recruiting station, Chattanooga, Tenn., and ordered to the *Rhode Island*.

Benton, F. L., surgeon, detached from the *Buffalo* and ordered to the *Philadelphia*.

Ames, M. H., P. A. surgeon, detached from the navy yard, Portsmouth, N. H., and ordered to the Asiatic station.

Dorsey, B. H., P. A. surgeon, detached from the *Philadelphia* and ordered to continue other duties.

Foster, T. G., P. A. surgeon, detached from the *Buffalo* and ordered to duty at the Naval Hospital, Mare Island, Cal.

Minter, J. M., P. A. surgeon, detached from the first provisional of marines, expeditionary forces, and ordered to continue other duties.

French, G. R. W., asst.-surgeon, detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Albatross*.

Lee, A. E., asst.-surgeon, detached from the *Albatross* and ordered to duty at the Naval Hospital, Mare Island, Cal.

Huff, E. P., asst.-surgeon, detached from the *Villalobos* and ordered to the *Charleston*.

Noble, D. H., asst.-surgeon, detached from the *Charleston* and ordered to the *Villalobos*.

Public Health and Marine-Hospital Service

Changes for the week ended April 20, 1910:

Carter, H. R., surgeon, granted 3 days' leave of absence from April 14, 1910.

Anderson, John F., P. A. surgeon, granted 3 days' leave of absence from April 18, 1910, under Paragraph 189, Service Regulations.

Lloyd, B. J., P. A. surgeon, granted 7 days' leave of absence from April 13, 1910.

Creel, R. H., P. A. surgeon, relieved from duty at Evansville, Ind., and directed to proceed to Seattle, Wash., and report to the commanding officer, Revenue Cutter *Tahoma*, for duty.

Collins, G. L., P. A. surgeon, leave of absence for 1 month from April 14, 1910, amended to read 1 month from April 21, 1910.

Spratt, R. D., P. A. surgeon, granted 1 day's leave of absence, April 5, 1910, on account of sickness.

Frost, W. H., P. A. surgeon, granted 1 day's leave of absence, April 16, 1910, under Paragraph 191, Service Regulations.

Ashford, F. A., P. A. surgeon, granted 15 days' leave of absence from May 7, 1910.

Hotchkiss, S. C., asst.-surgeon, bureau order of March 5, 1910, to proceed to Honolulu, Hawaii, revoked. Directed to report to the commanding officer, Revenue Cutter *Bear* for duty.

Turnipseed, D. C., asst.-surgeon, relieved from duty at Baltimore and directed to proceed to San Francisco and report to the commanding officer, Revenue Cutter *Perry* for duty.

Bailey, C. A., acting asst.-surgeon, granted 6 days' leave of absence from April 12, 1910.

Bingham, E. O., acting asst.-surgeon, granted 15 days' leave of absence from May 6, 1910.

Hollman, H. T., acting asst.-surgeon, granted 2 days' leave of absence from March 31, 1910, under Paragraph 210, Service Regulations.

Hume, Lea, acting asst.-surgeon, granted 10 days' leave of absence from April 12, 1910.

Lawhorn, C. C., acting asst.-surgeon, granted 25 days' extension of leave from March 12, 1910, on account of sickness.

Townsend, W., acting asst.-surgeon, granted 7 days' leave of absence from April 14, 1910.

Walker, R. T., acting asst.-surgeon, granted 18 days' leave of absence from April 25, 1910.

Watkins, McD., acting asst.-surgeon, granted 2 days' leave of absence from April 13, 1910.

Wright, F. T., acting asst.-surgeon, granted 15 days' extension of leave from March 18, 1910, on account of sickness.

Boards of medical officers were convened to meet on April 25, 1910, for the purpose of making physical examinations of officers of the Revenue-Cutter Service as follows:

San Francisco: Surgeon James M. Gassaway, chairman; P. A. Surgeon R. E. Ebersole, recorder.
Portland, Me.: Surgeon C. E. Banks, chairman; Acting Asst. Surgeon A. F. Stuart, recorder.
Wilmington, N. C.: Surgeon C. H. Gardner, chairman; Acting Asst.-Surgeon W. D. MacMillan, recorder.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Many Organizations of Physicians and Laymen and Many Newspapers Endorse Department of Health

During the past week the following county medical societies and other organizations have adopted resolutions endorsing the Owen bill: Fourth District Medical Society of South Dakota; Washington County, Arkansas; Washington County, Tennessee; Montgomery County, Arkansas; Alameda County, California; King County, Washington; LaClede County, Missouri; Tolland County, Connecticut; Jefferson County, Iowa; Sebastian County, Arkansas; Montcalm County, Michigan; Clinton County, Missouri; Blue Earth County, Minnesota; Columbus, Ohio, Academy of Medicine; Knox County, Kentucky; Fannin County, Texas; Jackson County, Missouri; Dawson County, Montana; Lincoln County Nebraska; Sequoyah County, Oklahoma; Hampden District, Massachusetts; Marion County, Missouri; McLean County, Kentucky; McCracken County, Kentucky; Henry County, Indiana; Wayne County, Michigan; the Hannibal Commercial Club of Hannibal, Mo.; Chamber of Commerce of Duncan, Okla.; Woodward Commercial Club, Woodward, Okla.; Board of Education, Paducah, Ky.; Protestant Ministerial Association, Paducah, Ky.; General City Council, Paducah, Ky.; Hobart Chamber of Commerce, Hobart, Okla.; Mayor and City Council, Sweetwater, Tex.; Health League, Lorain, O.; Board of Health, Ft. Smith, Ark.; Muscatine Commercial Club, Muscatine, Ia.; Tuscaloosa Board of Trade, Tuscaloosa, Ala.; Chamber of Commerce, Seattle, Wash.; Commercial Club, North Platte, Neb.; and the Glendive Commercial Club of Glendive, Mont.

Many petitions containing the signatures of prominent business men, politicians and influential citizens have also been sent to the members of Congress.

The following are some newspaper comments:

The Flint, Mich., *Daily Journal* says editorially, "Possibly in no branch of the public service is there a greater need for uniform laws and better interstate relationship than in the supervision of public health. . . . Remarkable strides have been made during the past ten years owing to a better public appreciation of the tremendous danger which results from neglect in this regard. Out of this campaign of education, which has been carried on by physicians and the press, has come an insistent and we believe, an intelligent demand for federal supervision of our health departments. The urgent need of such a department or bureau is quite generally appreciated. We need a central office, the sole functions of which shall be the safeguarding of public health by means of scientifically searching inquiries and the adoption of preventive remedies and measures."

The New York *Press* said, editorially: "It is worth while to note that the bill to create a national department of health, with a cabinet officer at its head, was introduced into the Senate by Senator Owen, of Oklahoma, a southern Democrat, and early in life under the influence of the tradition that national activities should not be extended. But like other men, he perceives that what the nation can only do or can better do it should do and on the health matter he does not hesitate to declare himself a nationalist. Disease is spread through the pollution of interstate streams. It is conveyed through a lack of sanitary regulation in relation to interstate commerce. Pestilence comes in from abroad and there is need of common regulations. A central organization of dignity and importance will have a most potent influence on the health departments of states and cities that will seek its advice and cooperation. It will be a force for uniform legislation and uniform administration. Its effect, in this regard, will be comparable to that of the Department of Agriculture in the agricultural field, a department whose indirect work is quite as valuable as the direct. . . . There are approximately three million people in this country prostrate from preventable disease. The tax on industry therefrom is greater than the entire burden of government. Here is an interest certainly broad enough to justify national activity and to abate in some measure the prejudice that exists against the creation of new governmental departments and the enlargement of the cabinet. . . . It can hardly be doubted that if there was a minister of public health, and [if] hygiene was thus nationally recognized, there would be a great stimulus everywhere to the warfare against disease."

The Minneapolis *News* said, editorially, April 12: "Minneapolis has joined a national movement to secure proper governmental conservation of the public health. . . . The government maintains no well organized, centralized and efficient department for coping with the subject of public health. There are various agencies but they are scattered and subordinated. . . . The movement for a federal department of public health is now well under way and the sooner it is demanded by the people at large, as well as by physicians, the sooner it will be realized."

The Beaver Falls, Pa., *Tribune* says, editorially: "The introduction by Senator Owen of a bill calling for the establishment of a federal department of health under the secretary of health, who shall be a member of the cabinet, is the entering wedge in a campaign that should be prosecuted vigorously until the desired end has been attained. . . . That congress has not acted along this line heretofore is believed to be due to an impression that there was no great public demand for such action. But public sentiment has changed in recent years. The people are waking up to the need of health conservation and members of congress are being urged to exercise their influence for the much desired reform. The people of the United States should have a department of health and the present session of congress should not adjourn until the necessary legislation has been enacted."

The Denver *Post* says, editorially: "Senator Owen, of Oklahoma, has introduced a bill providing for the organization of a department of health, which would rank equally with the already existing departments. The national platforms of the Republican and Democratic parties both endorsed the creation of some such machine of public hygiene. President Taft has given the proposal his approval. But the Owen bill is not an administration measure. It will certainly meet with opposition from many quarters. You can help it not a little by writing to your representatives, and the senators, saying a word in its favor. A department of health must be created sooner or later and the sooner the better."

Other Department of Health Bills

Hon. Charles E. Creager of Oklahoma introduced into the House of Representatives, April 15, the same bill as that introduced into the Senate by Senator Owen of Oklahoma, providing for a Department of Public Health with a Secretary of Public Health in the Cabinet.

Hon. James S. Simmons of New York introduced, April 22, a bill (H. R. 24827) to establish a Department of Public Health. Mr. Simmons' bill, while drawn along much the same lines as that of Senator Owen, contains a number of points of difference. Section 1 provides for a Commissioner of Public Health with a salary of $7,500 instead of for a Secretary of Public Health who shall be a Cabinet officer. Section 2 of the Simmons' bill provides for a Director-General and subordinates instead of for assistant secretaries, while Section 3 is practically the same as the same section in the Owen bill except that the regulation of animal diseases, which in the Owen bill was made a part of the duties of the Department of Health, is omitted in the Simmons' bill. Section 5 of the Simmons bill is practically a condensation of Sections 6, 7, 8 and 9 of the Owen bill. This section reads as follows:

Section 5.—That it shall be the duty and province of the Department of Public Health to supervise all matters within the control of the Federal Government relating to the public health transferred

by or under this Act to such department. It shall gather data concerning all matters relating to the public health, establish chemical, biologic and other standards necessary to the efficient administration of that department, impose and enforce federal quarantine regulations, and give due publicity to all matters necessary to the protection and preservation of the public health which are strictly within the constitutional obligations of the United States, cooperating, so far as practicable, with the health authorities of the several states of the Union. It shall be the duty of the Commissioner of Public Health, on proper requisition, to provide any medical, sanitary or other health service required by another department of the Government, and all departments, except the Department of War and the Department of the Navy, requiring medical, surgical, sanitary, or other similar services shall apply to the Commissioner of Public Health therefor wherever it is practicable.

County Secretaries Conferences

The custom of holding an annual conference of the county secretaries and executive officers of the state organization, either in connection with the annual session of the state association or at some time during the winter, is becoming more common and is deserving of encouragement. The success of an organization depends on the executive ability of the officers in charge of the society work; of these the county secretary is by far the most important. Anything, therefore, which can be done to increase his efficiency or to lighten his labors is deserving of encouragement.

In a number of states, particularly Pennsylvania, Ohio, Illinois, Iowa, Missouri and Michigan, these conferences have become established features of society work, having been held consecutively in some states for several years. A number of other states are arranging to hold such conferences in connection with their approaching meetings.

MICHIGAN

The annual conference of the county secretaries of the Michigan State Medical Society was held in Detroit on January 13. The proceedings appear in the *Journal of the Michigan State Medical Society* for April.

Dr. A. E. Bulson, Jackson, Mich., councilor of the second district, spoke on "Medical Organization Work," emphasizing the importance of the county society which, he said, "must be a living torch in the community, in the front rank fighting superstition and ignorance, ever ready to uphold the honor and dignity of the profession, and the betterment of society. The accomplishment of these results calls for the cooperation of every member. The secretary may direct the work but he must have the support of the entire membership."

Dr. W. T. Dodge, chairman of the council, spoke on "The Councilor's Relation to the County Society," advising the councilors to make themselves thoroughly familiar with conditions in their districts but not to interfere in county society affairs needlessly and especially not to assume a dictatorial attitude.

Dr. Archie MacKinnon, secretary of the O. M. C. O. R. O. Medical Society (a society covering six counties), of Lewiston, discussed "The Business Affairs of the County Secretary."

"Postgraduate Work" was discussed by Dr. Wilfrid Haughey, the new secretary of the state society, who gave the experience of the Calhoun County Medical Society with postgraduate work. In this county there are three cities, two of them being twenty-six miles apart. Accordingly, a postgraduate class was organized in each city. For the first year the society outlined its own course of study. The second year the Battle Creek Medical Club was organized as a branch of the Calhoun County Medical Society, and the postgraduate course recommended by the American Medical Association was adopted. This has since been followed with much success.

Dr. Frank C. Kinsey, of Three Rivers, spoke on "Ethical Problems of the County Secretary," discussing advertising, eligibility to membership in county societies, the mistakes of young practitioners and other ethical problems which come before the county organization.

Dr. V. A. Chapman, of Muskegon, described the plan followed in the Muskegon-Oceana County Society. In making up the program the names of members are taken in alphabetical order and each member is made responsible for a certain meeting for which he writes and reads a paper, and supplies such entertainment for the society as he wishes. If he desires, he may invite a member of the profession from outside the local membership to take his place.

Dr. B. R. Schenck, the retiring secretary, spoke on "The Relation of the County Society to the State Society," emphasizing the importance of a uniformity of membership requirements and of simplicity in membership requirements.

IOWA

The third annual conference of the council, presidents and secretaries of county medical societies was held at Des Moines, January 25, the proceedings appearing in the *Iowa Medical Journal*, for March.

Dr. J. F. Herrick, of Ottawa, discussed programs, emphasizing the importance of following a definite system of study in arranging programs so that the county society might be a real postgraduate school to its members.

Dr. J. W. Kime, of Fort Dodge, discussed the systematic campaign against tuberculosis now being carried on in Iowa by the State Board of Control, the Iowa State Medical Society, the State Board of Health and the State Laboratory, urging the appropriation of a certain fund by the state to carry on this work.

Dr. Henry G. Langworthy, of Dubuque, secretary of the Dubuque County Medical Society, discussed the advisability of county societies establishing business bureaus for the collection of bills, etc., outlining the plan adopted by his county society which has proved successful.

A local attorney was designated as the representative of the members of the society to conduct the business bureau. He calls on members every three months for a statement of accounts. He also keeps a separate file of each physician's accounts and correspondence, making quarterly returns directly to him. No suits are brought on accounts without authorization from the physician. Each physician's account is open to his inspection at any time but to no one else. Commissions are paid the attorney for all accounts which he collects or for amounts paid to physicians on accounts which are in his hands. All accounts in the hands of the attorney are at any time open to the audit of the committee of the county society. Commissions are paid to the attorney ranging from 50 per cent. on collections of 2 dollars or under, to 20 per cent. on collections over 10 dollars, the expenditures of conducting the office being borne by the attorney.

Dr. J. C. Cooper, Villisca, president of the Montgomery County Medical Society, spoke on "What I Want or Expect of My County Society," urging regular meetings, systematic work and development of the social side of the county organization.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Third Weekly Meeting

DISEASES OF THE LARYNX

ACUTE LARYNGITIS: Diagnosis, treatment.

SUBACUTE LARYNGITIS.

CHRONIC LARYNGITIS: Diagnosis, treatment.

LARYNGITIS SICCA.

EDEMATOUS LARYNGITIS: Etiology, treatment.

ACUTE INFECTIOUS DISEASES OF THE UPPER AIR PASSAGES: Influenza, diphtheria, erysipelas. Pathologic changes in upper air passages due to scarlet fever, measles, variola, rubella, typhoid, malaria, etc.

CHRONIC INFECTIOUS DISEASES OF THE UPPER AIR PASSAGES: Syphilis, symptoms of primary, secondary and tertiary stages. Lesions in nose, in pharynx, in larynx. Hereditary syphilis, symptoms, diagnosis. Tuberculosis, diagnosis in nasal, in laryngeal tuberculosis. Lupus.

NEOPLASMS OF THE UPPER AIR PASSAGES: Benign tumors found in nose, in pharynx, in larynx. Malignant tumors in nose, in pharynx, in larynx.

Society Proceedings

COMING MEETINGS

Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
American Laryngological Association, Washington, D. C., May 3-5.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3-4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Association of American Physicians, Washington, D. C., May 3-5.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-5.
Connecticut State Medical Society, New Haven, May 25-26.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Assn., Hunter's Hot Springs, May 11.
National Association for Study of Epilepsy, Baltimore, May 7.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
Rhode Island Medical Society, Providence, May 31.
Texas, State Medical Association of, Dallas, May 10-12.

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy-seventh Annual Meeting, held at Memphis, April 12-14, 1910

(Continued from page 1400)

Discussion on Prostatic Hypertrophy

DR. S. R. MILLER, Knoxville: I have had the same experience that the specialist has, and that is the operative treatment of prostatic hypertrophy is as a rule very satisfactory, while the palliative treatment is extremely unsatisfactory. In all the cases that I can recall there was decided enlargement of the prostate and the patients submitted to operation, the results being very satisfactory. I have tried massage in prostatic hypertrophy, but have not had good results from it.

DR. J. A. CRISLER, Memphis: I have been particularly interested in Dr. Lewis' statement concerning the examination of the prostate and the conditions in the bladder prior to operation in these obstructive cases. I think we should speak of this condition as an obstructive prostate and not merely as an enlarged prostate; many of the enlarged prostates do not cause obstruction. In the cases I have had under observation, probably less than 40 in number, I have been unable in most of them to pass any kind of instrument into the bladder. These patients have been referred to me after the enlargement of the prostate had become very advanced, and when there was no possible way for the physician in charge to draw off the urine. All of us must agree with Dr. Lewis that we ought to make a careful diagnosis and a careful examination of the patient prior to operation, and when it is borne in mind that a large percentage of these cases occur in men over 60 and 70 years of age, a number of them having bad hearts, having some albumin and casts in the urine, and the urine being ammoniacal, an operation should not be undertaken until careful examination has been made to determine the condition of the various organs.

DR. JOHN L. JELKS, Memphis: One phase of this subject has not been touched on, which I think worthy of consideration. Some years ago, I called attention to a saceulated condition of the anterior wall of the rectum in many cases of prostatic enlargement and irritability. In a number of these cases in old men with prostatic enlargement, there is a hemorrhoidal tumor or a marked vascular pathology and saceulated condition in the anterior quadrant of the rectum. In these cases, I have resorted to anterior proctotomy which consisted of touching up the anterior wall of the rectum, which was sacculated, and producing a similar effect on the male bladder as would be produced on the female bladder by anterior colporrhaphy.

DR. E. H. MARTIN, Hot Springs, Ark.: In discussing chronic prostatitis Dr. Livermore mentioned some cases in which the patients complained of pains in the legs. I do not think he went far enough in this regard. I think the disease which we ordinarily know as chronic gonorrheal rheumatism is due to prostatic disease. In many of these cases the prostate is entirely overlooked when the man consults a physician with a characteristic history of pains in the bottom of his feet, pains running down the legs and involvement of some extremity.

DR. RICHARD A. BARR, Nashville: I was glad to hear Dr. Lewis emphasize prostatic obstruction as contrasted with prostatic hypertrophy. In a few patients I have treated there was marked prostatic obstruction without any hypertrophy. While I have not had any experience with cancer of the prostate, I have seen the mistake made of operating for cancer of the prostate when simple hypertrophy existed.

DR. J. W. HANDLY, Nashville: In the incontinence which follows the operation for prostatic hypertrophy or obstruction, my experience and observation do not corroborate the beautiful results which have been depicted in connection with these cases. I have seen a number of cases of prostatic obstruction and prostatic hypertrophy, and many of those I have seen have been followed by incontinence that lasted sometimes 3 or 4 or even 5 or 6 months, necessitating the wearing of a rubber urinal. I do not like to see the statement made that when we remove the prostate such a patient, at the end of 30 days or more, is able to pass urine in the normal way. I think that few patients do.

Clinical Significance of Silent Fluids in the Thoracic Cavity

DR. FRANK A. JONES, Memphis: During 12 years' experience at a large out-clinic, with 7 years' service in hospital work, I have been impressed with the fact that these fluids are frequently not recognized, especially when critical physical examination of the chest has not been made. These silent fluids may be serous, serofibrinous, purulent, or hemorrhagic. They may come on acutely or chronically. They are most frequently complications and sequelæ of acute or chronic renal lesions or of pulmonary and abdominal tuberculosis. In the out-clinic service, syphilis is often complicated with a tuberculous process. Cardiac lesions of whatever nature giving rise to failing compensation in the production of hydrothorax in my experience are always active and the physical findings are distinctive and typical. In tuberculous peritonitis with effusion when the process has not been active in the pulmonary tree, I have found in most instances bilateral pleurisy with effusion, latent in nature. In these cases, there are no circulatory or respiratory disturbances that would direct attention to its presence. The patient has neither dyspnea, cyanosis, cough, bulging of intercostal spaces, nor fixation of the chest walls. In chronic interstitial nephritis with its concomitant cardiovascular degeneration in men past middle life, silent hydrothorax is often overlooked. In my clinical experience the withdrawal of these silent tubercular effusions, when the temperature remains near normal, and when the constitutional disturbances are not marked, converts this latent picture into a volcanic panorama. The patient rapidly declines by the acute pneumonic phthisis route. On the other hand, when the fluid is silent and systemic infection active, free incision to promote drainage is clearly indicated. Those silent fluids as the result of inflammatory action not giving rise to symptoms can be explained on the ground of their gradual development.

Amebiasis, Complicated in One Instance by Pellagra; in Other by Eighteen Adenomata

DR. JOHN L. JELKS, Memphis: For several years I have observed skin manifestations of amebic infection and ulceration in the large intestine, but I made my first report in April, 1909, at the DeSoto County (Mississippi) Medical Society, and again in May, 1909, at the Arkansas State Medical Society. These lesions are either severally or successively erythematous, papular, pustular and edematous. They improve under treatment directed to intestinal infection and ulcerations. In one case, diagnosed by able clinicians and skin specialists as pellagra, the *Amœba hystolytica* was observed in the mucopurulent material taken from the rectum. In another case I observed eighteen adenomata in the rectum and sigmoid, complicating amebiasis. This is the second case in which I have observed adenomata. In the other case only nine tumors were found.

DISCUSSION

DR. GEORGE DOCK, New Orleans: This paper is especially interesting to me because I have been working with cases of dysentery and with pellagra for some time, and I have not been fortunate in seeing the combination, all the more disappointing in this respect. I early predicted that amebiasis would probably be a predisposing cause of pellagra, but my experience with the two diseases runs somewhat this way. We have had about 35 cases of distinct pellagra in New Orleans in the last season and all of these patients have had the stools examined and in many proctoscopic examinations were made. These patients were examined critically, because at the pellagra conference held last autumn one of the speakers stated that he found amebas in all cases of pellagra in the stools. Although New Orleans is a somewhat rich field for amebiasis we have not found the combination of amebiasis and pellagra to occur in a single case.

DR. LOUIS LEROY, Memphis: I have been interested in the relationship between amebiasis and pellagra, and was very much pleased to hear the view which Dr. Dock expressed as to the almost certain parasitic causation of pellagra because that is in accord with the views which have been forced on me for some time in considering this disease. There is no doubt that amebas are frequently associated with pellagra, almost too frequently to be looked on as a coincidence. Still I believe we are not ready to decide on an etiologic relationship between the two, because we see in this locality a large number of cases of amebic infection and a relatively small number of cases of pellagra, in which the two are associated. Again, there are many cases of pellagra in which amebas are not found.

DR. MARCUS HAAS, Memphis: My experience has been limited to about twenty cases of pellagra, and I am not willing to say that these cases were true pellagra, without going into the etiology of the disease. This manner of shooting up into the air as to the causative agent of pellagra does not help us, and will only muddle us. As to its relation to amebiasis I am not willing to agree to that at all. I believe we may have amebiasis and pellagra combined, but think it is simply a coincidence and that as a rule one disease has no relation to the other.

DR. WILLIAM KRAUSS, Memphis: I have seen a few cases of pellagra and my observations, careful as they have been, can add nothing to what has been said in the literature on this subject. There is some confusion, however, with reference to the seat of the lesions and the portals of entry. I am willing to admit that the intestinal tract is probably the portal of entry, or one of them; but so far as the symptoms are concerned the lesions we find post-mortem are a consequence, probably, of changes in the nervous system, and are not primarily due to the conditions of the gastrointestinal tract. I recall one patient who had hookworm disease, and subsequently developed pellagra, who died about six weeks after he was first brought under observation as a pellagrin, and in whom the entire intestinal tract showed no evidences of such a lesion as one would find in uncinariasis nor were any worms found at the post-mortem examination. There was a roughened-beard appearance of Peyer's patches, and a marked hyperemia of the entire intestinal wall, but that was all.

DR. G. C. SAVAGE, Nashville: At the New Orleans meeting of the Southern Medical Association the newspapers misrepresented my position in regard to what I said concerning pellagra. What I really did say was that I would just as soon believe that pellagra is a kind of leprosy as to believe it is caused by corn, but I do not believe either one.

DR. NEWTON EVANS, Nashville: It might be well in connection with Dr. Jelks' paper to report an observation which I made on some pellagrins in Nashville. Thirteen children are segregated for pellagra. I made examination of the feces of these thirteen children and in 5 of them found they had uncinariasis. I do not think this observation would have an influence in making us believe one disease is the cause of the other, and I believe that any number of children of the same class would probably give the same percentage of hookworm infection.

DR. E. H. MARTIN, Hot Springs, Ark.: It has been intimated from Nashville that pellagra is a contagious disease. From a perusal of the literature of the subject it seems to be non-contagious, and the fact that observation of its contagiousness has been made in Nashville ought not to warrant us in going on record as believing the disease is contagious. The contagion theory of pellagra does not appeal to me.

DR. WILLIAM LITTERER, Nashville: I think that pellagra is a separate and distinct disease, although it may be associated with other conditions, as Dr. Krauss has said. I made a post-mortem examination on a case of pellagra, in which I found almost identically the conditions described by Dr. Krauss. I have found, also, later in my work, something like seven months afterward, several hookworms in the intestinal tract.

DR. J. D. HOPPER, Jackson: I have read a good deal on pellagra since it has been brought before the medical profession, and with all due respect to the remarks of those who have spoken, I do not think we know anything about it. The Italians claim that it is maize or corn which produces the disease. As Americans it behooves us as physicians to disapprove the maize theory, because the corn in America is one of the resources of this country, from a financial standpoint. I do not think we ought to speak of corn as the cause of pellagra until that theory is absolutely proved.

Symptoms and Effects of Adenoids

DR. W. L. SIMPSON, Memphis: The symptoms and effects of adenoids are not seriously enough considered. It is not necessary to wait until all the cardinal symptoms of adenoids are present before a child is given relief. It reflects on the physician when a child or infant becomes anemic, rachitic, or has ear complications, recurrent attacks of croup, or has the adenoid facies, etc., if these conditions are due to the adenoid vegetation. Particular attention should be paid to children who are not up to the standard in the school. It is always possible to tell by means of a trained finger whether adenoids are present or not.

DISCUSSION

DR. G. C. SAVAGE, Nashville: The condition described is not fully realized by a large number of the profession. In Europe this condition is fully appreciated, and that appreciation has taken the form of the erection of a monument to Meyer, who discovered the condition. I know of nothing in childhood that demands treatment more than the removal of adenoid tissue in the vault of the pharynx. Dr. Simpson stated that the presence of adenoids is responsible for inflammation of the middle ear. That is absolutely true, and the statement cannot be made too emphatic. But when the ear is inflamed an operation ought not to be done. The acute condition of the middle ear should be allowed to pass away before the removal of the adenoids is undertaken.

DR. T. J. HERRON, Jackson: A woman consulted me recently suffering from a severe cold. She had tympanitis and a frontal sinus abscess. She was 22 years old, and was not a mouth-breather, so far as I could determine. I began to treat the symptoms, and the frontal sinus abscess, and on examination I found she had adenoid tissue, which I removed, thereby giving great relief.

DR. W. L. SIMPSON: One thing we should always remember is never to treat a running ear until we find whether the patient has adenoids or not.

Trifacial Neuralgia Treated by Alcohol Injections

DR. W. D. SWINK, Milan: The number of injections required for the relief of pain vary from 2 to 16, and relief or cure lasts from 4 months to 3 years. Cures are more quickly realized in those patients who have not undergone surgical operations, although relief has been secured from alcoholic injections when gasserectomy and the Abbe operations have failed. The freedom from pain after injections is not so long, perhaps, as from peripheral surgical operations, but reinjections can be so easily done that palliative relief can be obtained, if not, as some operators believe, a permanent cure. When these patients fail to get relief from alcohol injections, and the advocates of this treatment believe that there are very few cases of failure if the alcohol reaches the nerves, they should not by any means be made morphin habitués, as so many of them are, but should have the intracranial operation, as advised by Spiller. This consists in division of the

sensory root of the Gasserian ganglion, as performed by Frazier, Kocher and Cushing; it is less hazardous and more complete than total extirpation of the ganglion.

DISCUSSION

DR. W. T. BLACK, Memphis: My experience in the treatment of trifacial neuralgia has been limited. One can readily see how deep injections of alcohol or of osmic acid would be objectionable. I think the measurements would have to be very accurately made when injecting around the great wing of the sphenoid bone. I do not see why we may not injure, in some cases, the middle meningeal artery or the small meningeal nerve which goes through the forearm ovale, and I do not see why we may not puncture some of the veins going through the foramen of Vesalius if we are not careful in measurements. The relief from these injections is only temporary. In cases in which the supraorbital nerve is involved a cutting operation is more permanent.

DR. DUNCAN EVE, JR., Nashville: My experience is limited to 5 patients with trifacial neuralgia in whom deep injections of alcohol were used; of this number I have cured 2. One patient, who has gone on for 14 months without recurrence, received osmic acid and a portion of the nerve was resected. Another patient has gone 3 months without a recurrence of the pain. One case was a complete failure. In making the injections I use the needle of Patrick. I use a dull needle instead of a sharp one, as it reduces the amount of hemorrhage.

President's Address: The Higher Mission of the Physician

DR. JERE L. CROOK, Jackson: Health is the most valuable and most sought-after individual possession and the health of its people is the nation's greatest asset. Yet how tardily is the national conscience awakening to this stupendous fact. It is our duty and our task to teach the people this great truth, and to impress it so forcibly that legislators will be aroused to a full sense of their responsibility and give the medical profession the power in the national government which its purposes, achievements and importance demand. If convincing, tangible proof of the wisdom of this step be needed it surely can be found in the marvelous results of the sanitary campaign in Panama, under the efficient control of Dr. Gorgas. No well-informed citizen will deny that the success attending America's efforts in digging the great canal is due to the work of the sanitary corps. Modern medical science alone is responsible for our success where France failed. She had both men and money, but she had not learned how to keep her men alive and well. Dying men cannot dig a ditch or build a dam. An unfaltering faith in the mosquito theory of the causation of the tropical fevers, and an unwavering persevering persistence in the measures necessary to exterminate the cause, together with other approved, modern sanitary precautions, has converted the canal zone into a healthful, pleasant place of abode with a death-rate no greater than many cities of the United States. The canal work goes swiftly forward and presenting no insolvable engineering problems, with money and men in abundance, and the prestige of this great nation behind it, probably within five years the world will witness the wedding of the oceans and the commerce of Occident and Orient will pass through this wonderful waterway. Such a realization of the dream of the centuries could never have seemed so near but for the glorious work of the medical profession, the sacrifices of some of its noble sons—Carroll, Reed and Lazear—and the effect which a knowledge of these modern discoveries has produced on the legislative and executive branches of our government. No more brilliant and decisive example of the economic and humanitarian value of our profession could be desired. The result was attained by the members of the profession, teaching the people the truth and meaning of the mosquito theory of disease. It should be easy to induce legislators to recognize the practical value of these teaching campaigns. Our own state and many others are now sending out lecturers on fruit-growing and stock raising and building experiment stations to teach the farmers soil treatment and conservation. Surely it is reasonable and practical for an awakened public to demand that the states constantly maintain in the field a corps of medical lecturers to teach the conservation of human lives, by instructing the people how to avoid and detect disease.

Symposium on Uncinariasis

Following the president's address there was a symposium on hookworm disease.

DR. CHARLES W. STILES, Washington, D. C., spoke of the discovery of the hookworm, the distribution of the disease and its consequences, his remarks being illustrated by numerous stereopticon slides.

DR. GEORGE DOCK, New Orleans, discussed the symptomatology and diagnosis of hookworm disease; DR. LOUIS LEROY, Memphis, the clinical manifestations; DR. G. NEWTON EVANS, Nashville, the pathology and report of work along this line; DR. WILLIAM LITTERER, Nashville, spoke of hookworm dissection, with reference to the non-oviparous female.

Manic-Depressive Insanity

DR. JOHN W. STEVENS, Nashville, after defining this disease, discussed the etiology, pathology, symptomatology, diagnosis and treatment. Regarding treatment he said:

Treatment should very rarely be undertaken outside an institution, the danger of suicide or injury of relatives, in response to delusions in the depressed state, and the restlessness and noisiness of the maniacal patient being too great to permit it. Because of the increased sexual excitement present in the mildly maniacal woman, the closest supervision is necessary. In the treatment of the maniacal forms the indications are to control the excessive activity and talkativeness. This is best accomplished by rest in bed, the removal of all distracting influences and the exercise of kind but firm authority. If the restlessness and talkativeness be not restrained the patient thereby increases his own excitement. The ideal method of treating an excited maniacal patient is to isolate him completely from all other patients in a quiet room, with only a single nurse, who must be possessed of such personality as to enable him to exercise authority and control of this particular individual. The patient should be made to remain in bed and his restlessness and talkativeness checked so far as possible. Every idea to which he gives expression simply serves to call up another to his mind, for which there is an equal desire for expression. When it is not always practicable to thus isolate the patient with a special nurse, the same idea should be carried out with such modifications as the circumstances demand. At times it will be necessary to resort to sedative measures. Excellent results follow the use of the hot or cold pack, or the prolonged warm bath. Sulphonal, trional, chloral and the bromids are safe and effective sedatives for these patients. They should be kept in bed until the tendency to over-activity and talkativeness has in a large degree disappeared, and after being allowed up excitement and irritation should be avoided. In the milder types of mania it is frequently a good idea to confine the patient in bed for a period, in order to get control of him. In the care of the depressed cases there are no particular points to be borne in mind except those with which we are all familiar in the care of such patients. The danger of suicide must always be borne in mind and the patient watched accordingly. The occurrence of physical symptoms and indications for treatment must be met, as in other diseases, the same principle governing us.

Treatment of Salpingitis

DR. J. HUGH CARTER, Memphis: In cases of salpingitis we should get a complete history. A careful examination should be made and great care exercised in making the diagnosis. There should be thorough medical and hygienic treatment of the acute form of the disease. In the suppurative form of the disease operation should be done at once, or as soon as the inflammation has subsided, by the abdominal route.

DISCUSSION

DR. W. T. BLACK, Memphis: In the beginning of these cases strictly medical treatment should be given. The principal thing about salpingitis is to know how to treat the patient, whether to operate or to wait. Undoubtedly, in the acute cases we should not operate until the patient has passed over

the acute illness. If the salpingitis is due to streptococcus infection, the abscess opening down in the broad ligament or in the pelvis, I think that drainage through the vagina will be of great benefit. It is true that sometimes these patients recover without operation, or at least become symptomatically well.

DR. L. E. BURCH, Nashville: The direct cause of salpingitis is infection. There are many predisposing causes, and it is impossible to differentiate salpingitis from oöphoritis, endometritis, and peritonitis, that is, eliminating a tuberculous condition. A patient with salpingitis usually gives this history: She has been perfectly well. She is delivered of a child, and in the course of time trouble develops. On the other hand, she may have had suspicious intercourse, and trouble develops. Salpingitis, in other words, is an ascending infection, which first involves the endometrium, then spreads to the tubes, then to the ovary and to the peritoneum. In the acute stage of saplingitis the treatment is palliative. The patient should be kept on a liquid diet. She should be put in the Fowler position or the exaggerated Fowler position, and hot douches and cold applications used. If, after trying this treatment the symptoms do not subside, and there is acceleration of the pulse, and the patient's expression is anxious, and the belly begins to balloon up, and she has obstinate constipation with vomiting, then operative treatment is indicated.

DR. J. H. CARTER: I do not agree with Dr. Burch that we cannot make a diagnosis of salpingitis before the inflammation extends to the ovaries and to the broad ligaments, or cellular tissues. Gynecologists operate on these patients after they have been treated in a palliative way, and there are no adhesions and no sign of any inflammation in the broad ligaments or ovary. If we open the abdomen and find a double salpingitis and both tubes have to be removed, I do not believe we are justified in leaving the uterus. It should be removed also.

(To be continued)

CHICAGO PEDIATRIC SOCIETY

Regular meeting, held March 15, 1910

DR. I. A. ABT in the Chair

Congenital Hypertrophic Pyloric Stenosis, with Report of Case

DR. G. L. KAUFMANN: There is still much difference of opinion as to the etiology of pyloric stenosis. Some cases are cases of pure spasm, which eventually leads to hypertrophy and stenosis, while others are stenotic from the onset, the hypertrophy being secondary.

DISCUSSION

DR. C. G. GRULEE: The Germans regard this as a spastic condition, the hypertrophy being consecutive to the spasm. Americans regard the two conditions as being entirely separate. One foreign writer had 13 or 14 cases, of which number he was able to follow 7 of the patients for several years afterward. In each of these cases there was dilatation of the stomach and increased acidity. Of 19 patients treated without operation, 14 recovered and 5 died. Of 20 patients operated on, 14 recovered and 6 died, so that there is not much in favor of operative treatment. About 3 years ago I had a patient on whom a successful operation had been done. That child is now 4 years old and is well and strong. A gastroduodenostomy was done, and although the child had much trouble the following summer from gastrointestinal disturbance, a complete recovery was made as the result of proper feeding.

DR. I. W. ABT: It would be interesting to differentiate clinically the cases of spasm from those of true congenital hypertrophic stenosis.

DR. H. F. HELMHOLTZ: In a recent publication the writer reviewed the records of every case that came to the postmortem. He could not find a single one that would confirm the ideas of a congenital stenosis. In each case there was folding of the mucous membrane, showing that there had been at one time a patulous opening of normal size. This opening had evidently been narrowed by the spasm, so that the stenosis is a secondary affair.

DR. I. A. ABT: Is it possible that some of these cases have a relation to a spasmophilic diathesis, and that such children later show evidences of tetany or spasmophilia?

DR. F. X. WALLS: I have seen about 15 of these cases; in 12 an operation was done, and I was favorably impressed with the surgical results obtained. The children who had any degree of vitality always seemed to react well to the operation, and those who so reacted recovered. Only 2 children died soon after the operation, and 1 died about a month after the operation from acute gastrointestinal disturbance. The others are living and well. I would suggest surgical intervention as soon as I believed I was losing ground after trying the various methods of medical treatment that had been suggested.

DR. EFFA V. DAVIS: I would like to suggest toxemia of pregnancy in such cases. I find that children born of mothers who have been mildly toxic usually show conditions that can be traced back to the mother's toxemia.

DR. F. X. WALLS: It is stated that the mother of my patient suffered from gastric disturbance during the pregnancy, and that she took considerable amounts of acid. However, the labor was uneventful and the mother is now entirely well.

Is Compulsory Isolation on the Premises Effective Treatment for Whooping-Cough?

DR. J. H. HESS: Recently I was criticized by the Chicago Department of Health for allowing a child, ill with whooping-cough to go out into the streets. A somewhat similar experience about 4 years ago has caused me to think seriously about this matter. The family of the patient was told not to take the child out of the flat except by the rear entrance, but that the child might be allowed to play in the backyard. The family lived in a six-flat building. Most physicians are not reporting whooping-cough cases. I report everything, because I feel that by doing so the responsibility is assumed entirely by the Department of Health. However, it must be remembered that many of these cases do not come to the attention of a physician. The child is not ill enough, at least in the opinion of the parents, to require medical attendance; or the child is treated with prescriptions that have been secured from some other patient. The other day a little boy stopped me on the street and asked for a certificate which would readmit him to school. He had had whooping-cough, but had not had medical attention. I would suggest that all houses or apartments in which there are whooping-cough cases be placarded; that the children be taken out into the open air, tagged with a red ribbon, marked whooping-cough. This procedure was first suggested by Grandy, of Norfolk, Va., and in his experience it has proved very effective.

My experience has been that the paroxysms of whooping-cough are in part occasioned by vitiated air. These children are in better health if allowed to be in the fresh air after the paroxysmal stage has passed. The question is: Can they get sufficient fresh air within the four walls of a flat? Fresh air is the accepted treatment for whooping-cough. Instead of depending on the physicians who are not reporting their cases, make every mother an inspector, and every case is sure to be reported.

DISCUSSION

DR. HEMAN SPALDING, Department of Health: The ordinance requires that the house be placarded and the people in it quarantined. We allow adults to go about their business if they are careful not to get their clothing soiled by the child. We allow children who have had whooping-cough their liberty. Physicians confuse the treatment of a patient with the treatment of the public. We know it is the best thing for the child to go out, but we are not treating the child—we are treating the public. The question of the backyard is an open one. The child will go to the fence and convey the contagion to a neighbor, or out into the alley, and an epidemic results. I have known scores of instances where the contagion was conveyed in that way. As to tagging the child, if that were done, particularly in some parts of Chicago, a mob of children would run after that child, chase him, and try to pull the tag off. In some parts of the city we can do better work without placarding, because even the card attracts curious-minded

people. We cannot improve much on our present methods of quarantine. People will hide cases, but by doing so they become law-breakers; some of them get caught at it and pay the penalty. The law requires that parents report such cases if a physician does not. This would cover the cases in which a physician is not in attendance.

DR. H. W. CHENEY: In some neighborhoods quarantine might be discretionary, to a certain extent. The patient might be allowed to go outside of the house if accompanied by the parent or nurse, so that other children could be kept away.

DR. S. J. WALKER: The object of the Department of Health is to limit morbidity and reduce mortality. In the case of infectious diseases of limited duration, this can be done more easily than in the case of whooping-cough. Whooping-cough is extremely widespread, and for two weeks the disease is in the incipient stage. During this time, the disease is spread broadcast, and as these cases are not reported, it is impossible to control that element in the spread of infection. We all know that the best thing for the patient with whooping-cough is plenty of fresh air. It is impossible to obtain enough air in a flat or house or a small backyard. I feel convinced that the mortality from whooping-cough would be much increased if strict quarantine were enforced. The morbidity, however, might be reduced by such a procedure.

DR. HEMAN SPALDING: Proper quarantine cannot be maintained in any case, except in a hospital, and there is no hospital in this city for that purpose. If one part of a park were set aside for these children, and physicians would superintend getting their patients to that place, it would be all right. One cannot trust nurses, parents, or anybody. Besides, people will say that they are not afraid of the disease. The public must be protected against itself.

DR. G. KOEHLER, Department of Health: This may be considered from two points, that of the patient and that of the public, the former in his relation to others, and the latter in its relation to the health officer. The public demands protection from disease. Health officials recognize the increased mortality from whooping-cough and measles. The mortality from scarlet fever and diphtheria is decreasing. Both these conditions must be ascribed to insufficient quarantine, in the first instance, and to effective quarantine, in the second. There is no doubt that the mortality and morbidity of whooping-cough and measles could be reduced considerably if we had effective quarantine. Unfortunately, the diagnosis cannot be made early, and many of these patients do not have medical attendance. It is during the early stages of the disease, when it is practically unrecognizable, that the contagion is spread. This nullifies all efforts that might be made afterward to control the spread of infection. The greatest harm is done before the disease is recognized. Isolation on the premises, from the health officer's standpoint, is the proper thing, and in certain localities it would be impractical to permit these patients to go out anywhere. The number of cases reported is steadily increasing, and consequently the recorded death rate is diminishing. I agree with Dr. Spalding that it would not be a good thing to tag children in certain districts, because of the attention such a tag would attract. In other districts it might be all right.

DR. I. A. ABT: Adults have whooping-cough as well as children. I have never seen an epidemic of whooping-cough in a family that the father and mother did not also get the disease; therefore, rigid quarantine would seem to be essential. Unfortunately, it is well-known that the only treatment for whooping-cough is fresh air; therefore, sanitarians should also be humanitarians. By keeping these little patients confined within a flat or house we are certainly not doing the best thing for their recovery.

DR. F. X. WALLS: It is difficult to recognize whooping-cough in the early stages; rarely does the patient go to bed. Under such conditions, I doubt that the placarding of the houses has really altered the condition, so far as one might be led to believe. There has been no reduction in mortality. The enforcement of strict quarantine would certainly help considerably, but, under conditions as they exist in whooping-cough, our efforts along the lines of a vigorous quarantine are futile. Quarantine will be opposed and the results to be desired are materially nullified.

DR. I. D. RAWLINGS, Department of Health: Placarding is the proper thing. It arouses the people in the neighborhood, and they report every suspicious case. The Department of Health had under consideration the advisability of placing a nurse in the various parks and playgrounds to detect cases of whooping-cough. These places are the breeding-grounds for the spread of infection. I do not believe that it would be wise to tag the child.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Regular; Little Rock, May 10-11. Sec., Dr. F. T. Murphy, Brinkley.

FLORIDA: Eclectic; Tampa, May 2. Sec., Dr. Hiram J. Hampton, 1805 Florida Avenue.

GEORGIA: Regular; Augusta, May 2-3, Atlanta, May 4-7. Sec., Dr. I. H. Goss, 297 Hancock Avenue, Athens. Homeopathic: Atlanta, May 15. Sec., Dr. R. E. Hinman, 153 Whitehall Street.

LOUISIANA: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street. Homeopathic: New Orleans, May 2. Sec., Dr. Gayle Aiken, 1102 St. Charles Avenue.

MASSACHUSETTS: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

MISSISSIPPI: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

NEBRASKA: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

NEVADA: Carson City, May 2. Sec., Dr. S. L. Lee.

NEW YORK: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

TENNESSEE: Memphis, Nashville and Knoxville, May 3-4. Sec., Dr. C. A. Abernathy, Pulaski.

New Mexico January Report

Dr. J. A. Massie, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fe, Jan. 10, 1910. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. Two candidates were examined, both of whom passed. Sixteen candidates were licensed on presentation of satisfactory credentials. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Tennessee	(1907)	85.8
Gate City Medical College	(1904)	75.4

LICENSED ON CREDENTIALS

College	Year of Grad.
Chicago Homeopathic Medical College	(1883) (1896)
Bennett Medical College, Chicago	(1907) (1909)
University of Iowa, College of Medicine	(1900)
Hospital College of Medicine, Louisville	(1907)
University of Louisville	(1907) (1909)
Detroit College of Medicine	(1903)
St. Louis College of Physicians and Surgeons	(1899) (1901)
Columbia University, College of Physicians and Surgeons	(1885)
Western Reserve University	(1908)
Jefferson Medical College	(1907)
University of Pennsylvania	(1899)
Vanderbilt University	(1908)

New Hampshire January Report

Mr. H. C. Morrison, regent of New Hampshire State Board of Medical Examiners, reports the written examination held at Concord, Jan. 4-5, 1910. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 12, of whom 10 passed and 2 failed. One candidate was licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Baltimore Medical College	(1908)	77
Tufts College Med. School	(1907) 85; (1908) 85;	(1909) 82, 83
Boston University	(1903) 90;	(1908) 91
Dartmouth Medical School	(1908)	80
University of Vermont	(1909)	80, 89

FAILED

College of Phys. and Surg., Boston	(1908) 71;	(1909) 71

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Michigan, Homeopathic College	(1903)	Georgia

Oregon January Report

Dr. R. C. Coffey, secretary of the Oregon State Board of Medical Examiners, reports the written examination held at Portland, Jan. 4-6, 1910. The number of subjects examined in was 15; total number of questions asked, 108; percentage required to pass, 75; 5 per cent. is allowed for ten years of practice. The total number of candidates examined was 70, of whom 44 passed, including 4 non-graduates and 1 osteopath, and 26 failed, including 1 osteopath. The following colleges were represented:

PASSED College	Year Grad.		Total No. Examined.
Cooper Medical College	(1903)	(1909)	2
Coll. of Physicians and Surgeons, San Francisco	(1902)		1
George Washington University	(1905)	(1908)	2
Northwestern University Medical School	(1908)		1
Rush Medical College	(1879) (1895) (1903) (1905) (1907)	(1909)	6
Hahnemann Medical College and Hosp., Chicago	(1909)		1
State University of Iowa, College of Medicine	(1908)		1
State Univ. of Iowa, Homeo. College	(1897)	(1903)	2
Louisville and Hospital Medical College	(1908)		1
Baltimore University	(1897)		1
Baltimore Medical College	(1904)		1
University of Michigan, College of Med.	(1892)	(1908)	2
Hamline University	(1906)		1
University Medical College, Kansas City	(1897)		1
Washington University, St. Louis	(1903)		1
St. Louis College of Phys. and Surg.	(2, 1895)	(1897)	3
St. Louis University	(1908)		1
Columbia University, College of Phys. and Surg.	(1905)		1
Western Reserve University	(1908)		1
University of Oregon	(1909)		2
Willamette University	(3, 1907)	(1909)	4
Jefferson Medical College	(1904)	(1908)	2
Western University, London, Ontario	(1909)		1

FAILED			
Gross Medical College, Denver	(1892)		1
College of Physicians and Surgeons, Chicago	(1906)		1
Hering Medical College	(1908)		1
Hahnemann Medical College and Hosp., Chicago	(1885)		1
Illinois Medical College	(1908)		1
Rush Medical College	(1903)		1
Kentucky School of Medicine, Louisville	(1894)	(1908)	2
University of Louisville	(1907)		1
Baltimore Medical College	(1901)	(1905)	2
University Medical College, Kansas City	(1900)		1
Barnes Medical College	(1906)		1
Kansas City Medical College	(1896)		1
Ohio Medical University	(1904)		1
Starling Medical College, Columbus	(1901)		1
Eclectic Medical Institute, Cincinnati	(1906)		1
University of Oregon	(1906)	(1908)	2
Jefferson Medical College	(1906)		1
Western University of Pennsylvania	(1908)	(1909)	2
Memphis Hospital Medical College	(1909)		1
Western University, London, Ontario	(1894)		1
College of Phys. and Surg., Ontario, Canada*	(1903)		1

* This is an examining body; the name of college where medical work was taken was not given.

Marriages

LESTER EDWIN MEE, M.D., to Miss Charlotte Grubb, both of Chicago, April 27.

HENRY M. ROONEY, M.D., to Miss May Turner, both of Los Angeles, Cal., April 6.

WILLIAM B. EVANS, M.D., to Miss Mary S. Scott, both of Philadelphia, April 20.

HARVEY M. EGOLF, M.D., to Miss Bertha Bertch, both of Liberty, Ind., April 10.

GEORGE L. PAINTER, M.D., San Francisco, Cal., to Miss Mary A. Schenck of Alameda, Cal., April 6.

HARRY B. SOBERNHEIMER, M.D., Philadelphia, Pa., to Miss Holbrook-Latham of Colorado, April 14.

JOHN A. HARTWELL, M.D., New York City, to Miss Mary Butler Fulton, of Port Chester, N. Y., April 16.

EDGAR LYONS WOODS, M.D., U. S. Navy, to Miss Grace Douglas Anderson, at Alexandria, Va., April 14.

WILLIAM PRESTON MILLER, M.D., Hagerstown, Md., to Miss Annie Louise McWilliams, at Pasadena, April 26.

ALBERT STEVENS CUNNINGHAM, M.D., Goldfield, Iowa, to Miss Myrtle Blodgett of Renwick, Iowa, recently.

HARRY FRENCH THOMPSON, M.D., Forest City, Iowa, to Miss Louise Taylor of Alden, Iowa, at Denver, Colo., April 12.

Deaths

George C. Purdue, M.D. Medical College of Evansville, Ind., 1880; a member of the American Medical Association; the Southwestern Surgical Association and Western Surgical and Gynecological Association; surgeon-in-chief at the Wichita, Kan., Hospital; died in New York City, April 12, from peritonitis, following an operation for acute appendicitis, aged 56.

George A. Bradbury, M.D. Albany Medical College, 1883; a member of the American Medical Association; a practitioner of Lansingburg, Troy, N. Y., for more than twenty-five years; a member of the staff of physicians and surgeons of the Leonard Hospital; died at his home in that place, April 9, from angina pectoris, aged 53.

George A. Evans, M.D. Bellevue Hospital Medical College, 1873; a member of the Medical Society of the State of New York; physician to the Howard Colored Asylum, Brooklyn; one of the state medical examiners in lunacy; died at his home in Brooklyn, March 31, aged 59.

Johnson William Hagadorn, M.D. University of Michigan, Department of Medicine and Surgery, 1870; formerly a member of the American Medical Association; a member of the Michigan State Medical Society; died at his home in Lansing, April 17, from apoplexy, aged 70.

James F. Fitzsimmons, M.D. Northwestern University Medical School, Chicago, 1868; a member of the Ohio State Medical Association; a member of the board of pension examining surgeons; died at his home in Bucyrus, April 11, from angina pectoris, aged 66.

James Oakley Pingry, M.D. College of Physicians and Surgeons, New York City, 1868; a member of the Medical Society of the State of New York; a practitioner of Millbrook, N. Y., for thirty-five years; died at his home in that place, April 10, from paralysis, aged 66.

Walter Forester Adams, M.D. Boston University School of Medicine, 1900; a practitioner of Waltham, Mass., until 1907, when he removed to Rutland; died at the State Sanatorium in that place, April 1, from pulmonary tuberculosis, aged 36.

Newton Stephen Bell, M.D. University of Vermont, College of Medicine, Burlington, 1864; a member of the Connecticut State Medical Society; medical examiner and health officer of Windsor, Conn.; died at his home, April 11, aged 70.

Benjamin B. Mozee, M.D. Cincinnati College of Medicine and Surgery, 1869; a member of the Nebraska State Medical Association; of Geneva, Neb.; died at St. Luke's Hospital, Spokane, Wash., April 10, from paralysis, aged 71.

David Madill, M.D. Queen's University, Dublin, Ireland, 1871; of San Francisco; died in Oakland, April 9, as the result of injuries received by being struck by a Southern Pacific train near Sunol a few days before, aged 70.

Edward Ellis Nathan, M.D. Chicago College of Medicine and Surgery, 1905; College of Physicians and Surgeons, Chicago, 1906; died April 18, as the result of drinking cyanide of potassium, with suicidal intent, aged 26.

Johannes Abraham Otte, M.D. University of Michigan, Department of Medicine, 1886; formerly of Grand Rapids, Mich.; a medical missionary at Amoy, China; died of Asiatic cholera at that place, April 14, aged 48.

James M. Barbour, M.D. Homeopathic Hospital College, Cleveland, 187—; of Pittsburg, Kan.; a veteran of the Civil War; died in the Osawatomie State Hospital, April 6, from organic heart disease, aged 73.

Thomas Marion Wilson, M.D. Missouri Medical College, 1881; a member of the American Medical Association; of Eastland, Texas; died at that place, Dec. 14, 1909, from Bright's disease, aged 68.

Lorenzo Dickson Ray, M.D. Rush Medical College, Chicago, 1887; formerly of Gillespieville, Ohio; died at the home of his daughter in Park Rapids, Minn., April 1, from cerebral hemorrhage, aged 61.

Charles P. Turner, M.D. Jefferson Medical College, Philadelphia, 1851; a member of the American Academy of Medicine; died at his home in Philadelphia, April 12, from angina pectoris, aged 84.

T. J. Gordon, M.D. Tulane University, New Orleans, 1857; surgeon of the Twenty-second Louisiana Infantry, C. S. A., during the Civil War; died at his home in McComb City, Miss., April 2, aged 72.

George T. Twyman, M.D. Louisville Medical College, 1879; a member of the American Medical Association; of Independence, Mo.; died at Kansas City, Mo., April 18, from acute diverticulitis, aged 56.

George Farquhar Jones King, M.D. University of Pennsylvania, 1898; a member of the Rhode Island Medical Society; died at his home in Providence, April 12, from pneumonia, aged 43.

Havillia C. Hobbs, M.D. Eclectic Medical Institute, Cincinnati, 1881; a member of the American Medical Association; died at his home in Salem, Ind., April 18, from paralysis, aged 61.

Frederick Stanley Dewey, M.D. Washington University, St. Louis, 1880; formerly of Oklahoma City, Okla.; died at Edmond, Okla., April 13, from carcinoma of the larynx, aged 54.

Thomas Holmes Kennan, M.D. College of Physicians and Surgeons, New York City, 1868; a Confederate veteran; died at his home in Atlanta, Ga., April 10, from paralysis, aged 70.

Horace W. Cox, M.D. Medical Department Willamette University, Salem, Ore., 1879; formerly of Schurz, Nev.; died at his home in Corvallis, Ore., April 14, from arteriosclerosis.

Oel Sage Misick, M.D. Hahnemann Medical College, Chicago, 1893; Rush Medical College, 1894; formerly of Chicago; died in the Elgin State Hospital, April 9, aged 42.

George Foster Simpson, M.D. University of Vermont College of Medicine, Burlington, 1873; of North Adams, Mass.; died at his home, April 10, from myocarditis, aged 60.

David Simpson Richards, M.D. Medical School of Maine, Brunswick, 1856; died at his home in Richmond, Maine, January 7, from cerebral hemorrhage, aged 83.

Robert LeRoy Morgan, M.D. Syracuse University College of Medicine, 1897; formerly of Rochester, N. Y.; died at his home in Tupper Lake, N. Y., April 7, aged 36.

William R. Curtis, M.D. Baltimore University School of Medicine, 1887; of New Martinsville, W. Va.; died at that place, February 5, from locomotor ataxia, aged 45.

Lawrence W. Hart, M.D. St. Louis College of Physicians and Surgeons, 1897; mayor of Morehouse, Mo.; was shot and killed, April 12, by a political enemy.

John Meiners, M.D. Kansas City (Mo.) Hahnemann Medical College, 1905; of Tipton, Kan.; died at that place, January 9, from intestinal obstruction, aged 31.

Frank Howard, M.D. Barnes Medical College, St. Louis, 1898; of San Antonio, Texas; died at that place, February 9, from cardiac apoplexy, aged 59.

Ellington John Morgan, M.D. Jefferson Medical College, Philadelphia, 1860; of Bainbridge, Ga.; died at that place, January 28, of influenza, aged 73.

William Hutchinson, M.D. Rush Medical College, 1875; formerly of Rockford, Ill.; died at the Elgin State Hospital, April 6, from paresis, aged 62.

Edgar Pennypacker Brunner, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1869; died at his home in Philadelphia, April 8, aged 60.

John Joseph Nolan, M.D. St. Louis College of Physicians and Surgeons, 1895; died at his home in Nichols, Iowa, April 10, from pneumonia, aged 41.

Cyrenius G. Clark, M.D. University of Michigan, Department of Medicine, 1864; died at his home in Maumee, Ohio, April 5, from prostatitis, aged 77.

John W. Ashford, M.D. Jefferson Medical College, Philadelphia, 1897; of Watkinsville, Ga.; died at that place, January 21, of tetanus, aged 34.

Max Bruck, M.D. College of Physicians and Surgeons, Baltimore, 1902; of Newark, N. J.; died in Morris Plains, N. J., Oct. 18, 1909, aged 38.

John Haswell Rice, M.D. Castleton (Vt.) Medical College, 1852; of Pomona, Cal.; died at his home, March 21, from pneumonia, aged 83.

Cornelius Wilson Larison, M.D. Geneva (N. Y.) Medical College, 1863; died at his home in Ringoes, N. J., April 15, from paralysis, aged 73.

William Wheelock DeLancey, M.D. Jefferson Medical College, 1908; died in Phoenix, Ariz., March 27, from tuberculosis, aged 28.

Andrew Fairfield Reed, M.D. Harvard Medical School, 1874; of Arlington, Mass.; died at that place, April 15, aged 60.

Samuel W. Vaughan, M.D. Atlanta (Ga.) Medical College, 1858; of Hot Springs, Ark.; died at that place, April 12.

Jerome Keeley, M.D. Jefferson Medical College, 1864; died at his home in Christiana, Pa., April 2, aged 83.

Miscellany

OXIDASES AND PEROXIDASES

Those processes of oxidation which take the form of slow combustions and which occur either spontaneously or under the influence of the so-called oxygen-carrier, are of great interest to physicians because such changes are probably intimately concerned in all biochemical phenomena in which oxygen is involved. It is almost exactly one hundred years since the first investigations in this field were undertaken. During this time our knowledge of such processes has greatly increased, as may be seen from the exhaustive monograph, entitled "The Oxidases and Other Oxygen-catalysts Concerned in Biologic Oxidation," Bulletin No. 59, Hygienic Laboratory, U. S. Public Health and Marine-Hospital Service, by J. H. Kastle, professor of chemistry in the University of Virginia, and formerly chief of the Division of Chemistry, Hygienic Laboratory. The following is an abstract of this bulletin: Such oxidations as occur spontaneously in air or oxygen are known as autoxidations and substances capable of undergoing such oxidation, as autoxidizable substances. In the course of such oxidations, however, it frequently happens that other substances less readily oxidizable are also oxidized along with the autoxidizable substance. In other words, it has been found that one substance often has the power to induce the oxidation of a second substance, which ordinarily is not readily oxidizable. The second substance stands to this process in the relation of an acceptor, in the sense that it combines only with that oxygen which has been rendered active by the oxidation of the autoxidizable substance.

It was early noticed that many oxidations required, in addition to the presence of oxygen or air, certain favoring conditions, such as the presence of moisture, the action of electricity, or the intervention of apparently indifferent substances, such as finely divided metals, certain oxids or the action of living organisms. In explanation of these phenomena various hypotheses have been proposed. The principal theories of autoxidation and oxygen-activation are: (1) the ozone-theory of Schoenbein; (2) the *Spaltungs-Theorie* of Hoppe-Seyler, (3) the ionization theory of Van't Hoff; and (4) the peroxid theory of Traube, Bach, Engler, Manchot and others.

According to Schoenbein, autoxidations are accomplished through the action of ozone and autoxidizable substances are such as have the power of ozonizing the air. He also accounted for the phenomenon of oxygen-carrying on the supposition that ozone is formed through the action of the carrier and from his numerous observations he was led to believe that without the presence of such substances as convert ordinary oxygen into ozone, animals would be suffocated in the midst of an ocean of the purest, but inactive, oxygen as quickly as in a vacuous space. On the other hand, from his study of putrefaction and anaerobic fermentation, Hoppe-Seyler arrived at the notion that oxygen is rendered active through the agency of nascent (active) hydrogen, which in all such processes splits the inactive oxygen molecule into two (active) atoms. With one of these the nascent hydrogen combines to form water, thereby leaving the second oxygen atom also in an active condition and ready to combine with any substance (the acceptor) capable of oxidation. He accounted for the formation of hydrogen peroxid in certain processes of autoxidation on the supposition that even water could be oxidized by the second oxygen atom and this, as afterward pointed out by Traube, constituted the weak point in this theory. The ionization theory of Van't Hoff rests on the assumption that in gaseous oxygen we have a condition of chemical equilibrium represented by the equation $O_2 = O + O$, which may be interpreted to mean that under ordinary conditions gaseous oxygen contains a certain number of dissociated oxygen molecules, and that it is to these (active) ions that oxygen owes its power to oxidize autoxidizable substances. This conception seems really to have originated with Clausius. It received experimental confirmation at the hands of von Helmholtz and Richarz, and others. To Van't Hoff, however, we are indebted for first making use of this concept to explain the distribution of oxygen between two oxidizable substances. It fails, however, to account satisfac-

torily for the production of peroxids during processes of autoxidation and to this extent is defective.

Finally to Traube we owe the introduction of the following new ideas on the subject:

1. In all processes of oxidation the oxygen molecule as a whole combines with the oxidizable substance to form a peroxid $H_2 + O_2 = H_2O_2$.

2. Water participates in the greater number of autoxidations, hydrogen peroxid being formed as a by-product:

$$Zn + \begin{matrix} HO \\ HO \end{matrix} \Big] \Big[\begin{matrix} H \\ H \end{matrix} + O_2 = Zn(OH)_2 + H_2O_2$$

3. The phenomenon of oxygen-carrying is due primarily to the oxidation of a second substance by hydrogen peroxid resulting from the oxidation of the carrier in the presence of water.

4. The molecule of water is first decomposed in autoxidations and the hydrogen set free combines with an entire molecule of oxygen to form hydrogen peroxid. $H_2 + O_2 = H_2O_2$.

Later Engler and his co-workers have shown that the primary change consists in the formation of a peroxid of the autoxidizable substance. This may form hydrogen peroxid in the presence of water, or may oxidize another molecule of the autoxidizable substance or may oxidize another less oxidizable substance, the so-called acceptor. Engler and Weissberg assume a partial dissociation of the oxygen molecule giving it free valences as expressed by the graphic formula — O — O —. This may occur under the influence of heat, light, electricity, or predisposing chemical affinity, as in the case of nascent hydrogen, unsaturated organic compounds, etc. This partially dissociated oxygen is ready to unite with an autoxidizable substance forming a peroxid.

Thus the peroxid theory of oxidation accounts for the phenomena of autoxidation and oxygen-carrying on the supposition that spontaneously oxidizable substances have the power to unite directly with a molecule of partially dissociated oxygen to form peroxids.

Numerous examples of such oxidations can be found in the life of plants and animals. During the absorption of oxygen by plants various substances are formed which have the power of effecting oxidations which ordinarily can not be brought about by molecular oxygen alone, such as the bluing of guaiacum, and the decomposition of potassium iodid. These substances are very unstable, being destroyed by heat, by mineral acids and by various poisons. They are called oxidases and are closely connected with the peroxidases which have the power of transferring oxygen from hydrogen peroxid, which they decompose, to other substances and also with the catalases which are able to decompose hydrogen peroxid but cannot cause the oxygen evolved from this compound to unite with other substances. Similar substances are found in animal tissues. It is believed by Portier and Sieber that the oxidases serve the purpose of defense, having the power of destroying toxins. Sieber found that the fibrin of the blood of a normal horse gives no oxidase reaction, whereas the fibrin from a horse immunized against diphtheria toxin gives a blue color with guaiacum, indicating the formation of oxidases in the blood as the result of immunization.

The bluing of guaiacum in the presence of air and certain substances which act as oxygen carriers has long been used as a test for the presence of these substances. As long ago as 1809, the bluing of guaiacum by nitric acid and also by the fresh root of horseradish was noted by Planche, and he and other French observers found similar reactions with other vegetable products and showed that this property was destroyed by boiling. These observers did not, however, recognize the relation of these changes to the oxygen of the air, but Schoenlein, after the discovery of ozone, concluded that in plants and animals there existed substances capable of activating the oxygen of the air by converting it into ozone and of transferring such oxygen from hydrogen peroxid and other peroxids to oxidizable substances. Such substances he called oxygen-exciters and oxygen-carriers. Traube in his study of fermentation recognized the ferments as definite chemical substances and divided them into three classes, one of which he called oxidizing ferments. These he found acted as go-betweens, taking oxygen from the air or from peroxids and transferring it to oxidizable substances, themselves becoming reduced. This process could be repeated over and over again, the ferment remaining unchanged but capable of transferring an indefinite quantity of oxygen to other substances. It is to Bertrand that we owe the introduction of the term "oxidase" into science. He conceived of the oxidases as enzymes with oxidizing power. Duclaux has defined oxidases as substances which at ordinary temperature and under physiologic conditions, carry oxygen rapidly to substances on which, without the intervention of oxidases, ordinary oxygen would act very slowly. The oxidases are very readily soluble in water: they are also readily soluble in glycerin but in other organic solvents thus far investigated, they seem to be insoluble. They are very unstable in aqueous solution, even in the presence of mild antiseptics. They are precipitated by alcohol and can be redissolved by water after precipitation by alcohol and drying. They are non-dialyzable and show their colloid nature by adhering to precipitates (adsorption). They are impaired in their activity by temperatures slightly above that of the body (42 to 45 C.) and are completely destroyed at 100 C. Glycerin solutions of the oxidases are more stable than aqueous solutions. The oxidizing power of the different oxidases is exercised on different substances, but it is not confined to an individual substance as a rule. Thus laccase, an oxidase found in many plants, will oxidize laccol, the oxidizable substance of the lac tree, but will not affect tyrosin. Tyrosinase, on the other hand, oxidizes tyrosin to melanin, but does not affect laccol. Laccase, however, will oxidize a number of substances besides laccol, such as guaiacum, phenolphthalein, etc. Tyrosinase does not affect these reagents, but oxidizes a number of phenolic derivatives which laccase does not affect.

Classification of the Oxidases.—While several classifications of the oxidases have been made the following seems best adapted to present requirements:

1. Laccase: ferments oxidizing guaiacum, guaiacol, hydroquinone, phenolphthalein, tannin, etc., directly by means of atmospheric or dissolved oxygen and without the intervention of hydrogen peroxid. According to Bach and Chodat, laccase consists of a peroxidase, together with an oxygenase (peroxid).

2. Tyrosinase: ferments acting on tyrosin and related substances.

3. Aldehydase: ferments oxidizing aromatic aldehydes and related compounds.

4. Indophenol oxidase (Spitzer): ferments oxidizing a mixture of alpha-naphthol and para-phenylene diamin to indophenol and other substances.

5. The purin oxidases.

6. Glycolytic ferments, causing the disappearance of sugar from animal tissues.

In addition to the oxidases proper, we have among the related ferments and carriers the following: 1. Peroxidases; oxidizing oxidase reagents only in the presence of a peroxid, such as hydrogen peroxid. These are the indirect oxidases (Bourquelot), and the beta-oxidase of Grüss. According to Moore and Whitley, the peroxidase is the only type of oxidizing enzyme concerned in oxidizing processes occurring in living cells and tissues. 2. Catalases (Loew). These ferments actively decompose hydrogen peroxid, but are incapable of effecting the oxidation of oxidase reagents by means of the peroxid. 3. Oxygen-carriers (not true ferments). This class includes such substances as the iron-containing pigments of the blood, hemocyanin, and the gamma-oxidases of Grüss. They activate the oxygen of a peroxid, but differ from the true peroxidases in having greater stability.

Oxidase Reagents.—A considerable number of substances have been used as reagents for detecting the presence of the oxidases and peroxidases and a table of these is given by the author on p. 60 of his monograph. Guaiacum, aloin, phenolphthalein, etc., are examples of these reagents. Some of them have been used for quantitative purposes.

Laccase: Laccase is a ferment found widely distributed in plants, but rarely found in animal tissues, which has the power of oxidizing laccol, a constituent of the juice of the lac tree which turns brown and finally black on exposure to the

air. The ferment which brings about this change has also the power of bluing guaiacum, which constitutes a sensitive reagent for detecting its presence. By this reaction its wide distribution has been ascertained. Laccase is very soluble in water and is less readily precipitated by alcohol from its aqueous solutions than tyrosinase which frequently accompanies it. It is not readily destroyed by heat. Solutions containing both laccase and tyrosinase may be freed from the latter by precipitating with alcohol or by heating to 70 C., a temperature which destroys the tyrosinase but does not affect the laccase. The activity of laccase is weakened or destroyed by the action of strong acids, hydrogen sulphid, hydrogen cyanid, and a number of other poisons. Laccase has a protein character, but there is reason to think that it is composed of two substances, one of which has the nature of a peroxid, known as oxygenase and the other a true ferment, having the character of a peroxidase. Laccase always contains a small percentage of manganese. When injected into animals it gives rise to an antibody which retards the action of laccase, but not of tyrosinase. There is some reason to think that laccase from different sources has a somewhat different composition and that when injected into animals different varieties of antilaccase are produced according to the source of the laccase injected.

Tyrosinase: This oxidase is found widely distributed in the vegetable kingdom and is present in animal tissues to a much greater extent than laccase. It produces a red coloring matter which is later converted into a black pigment. The substance oxidized is tyrosin and the pigment produced is melanin. It is believed that tyrosinase is the agent concerned in the production of pigment in the skin of animals including man and that the coloring matter of melanotic tumors is produced from tyrosin in the same manner. Tyrosinase, like laccase, appears to consist of two constituents, an oxygenase which activates atmospheric oxygen and can be replaced by hydrogen peroxid in weak solution, and the other a specific peroxidase which makes possible the absorption of oxygen by tyrosin, either from the oxygenase or from hydrogen peroxid. Some observers have found evidence of the formation of an antityrosinase in the blood serum of animals after the injection of tyrosinase and it appears that the antityrosinase which is produced after the injection of tyrosinase of vegetable origin is different in some respects from that formed after the injection of tyrosinase of animal origin.

Purin Oxidases: From the standpoint of the physician great interest attaches to the oxidation of the purin bases. The precursors of uric acid are xanthin and hypoxanthin and these are converted into uric acid by an oxidase existing in the pulp of the spleen and of the liver. This body has been separated and shown to be capable of converting xanthin and hypoxanthin into uric acid, in a current of air. It does not act, however, on the antecedents of xanthin and hypoxanthin, viz., guanin and adenin. These require first to be converted into xanthin and hypoxanthin respectively, by the removal of an amino group, a process called desamidation, which occurs under the influence of two hydrolytic ferments, known as guanase and adenase.

Peroxidases: These substances are sometimes called indirect oxidizing ferments, for the reason that they cannot accomplish the oxidation of oxidizable substances by means of gaseous or dissolved oxygen. They have the power, however, of accomplishing such oxidations through the instrumentality of hydrogen peroxid and other peroxids. There is much evidence that hydrogen peroxid has the power of uniting with other substances to form unstable peroxids which readily yield their oxygen to oxidizable substances. The peroxidases are found in all living tissues and their presence seems to be essential to the exhibition of vital properties. Seeds which no longer contain peroxidases are incapable of germinating. In the blood the peroxidases have been found especially in the white cells. The investigations of Bach and Chodat and Kastle and others lead to the conclusion that the oxidases are mixtures, composed of a peroxidase with a complex organic peroxid which has been called by Bach and Chodat an oxygenase. This may combine under the influence of the peroxidase with the oxidizable substance to which it imparts its oxygen and is again separated in a reduced form. This reduced form takes oxygen from the air to regenerate the peroxid or oxygenase.

Catalases: The catalases differ from the peroxidases in that while they decompose hydrogen peroxid the oxygen is given off in an inactive form and is incapable of producing oxidation. There is much speculation as to the nature and function of catalases and it may be after all that the statement that they cannot effect or hasten oxidation is too absolute. They may be peculiar forms of the peroxidase.

Oxygen-Carriers Which Are Not Ferments.—A study of the oxidations occurring in the blood shows that it contains several classes of oxidizing ferments, but is after all not dependent on these for its principal oxidizing power. Oxidases are contained in the cells which are separable by water and blue guaiacum directly. There are also found peroxidases which will only act in the presence of hydrogen peroxid and catalases which decompose hydrogen peroxid, but do not effect oxidations. All these substances are decomposed and destroyed by boiling, but the power to blue guaiacum in the presence of hydrogen peroxid remains. It is evident that the power of the blood to blue guaiacum does not depend solely on the above mentioned ferments, but must be attributed mainly to the iron containing hemoglobin or hematin. This acts as an oxygen carrier. This serves to suggest that not all the oxygen-carriers occurring in living tissues have the nature of enzymes and points to the importance of such metals as are capable of existing in two or more states of oxidation for processes of oxidation occurring in living organisms.

Metals Essential Constituents of Oxidases and Peroxidases.—The investigations of Bertrand have shown that laccase owes its oxidizing power to the presence of small quantities of manganese. According to Spitzer the oxidizing power of animal tissues is referable to certain nucleoproteids which they contain and the oxidizing power of these substances is in turn referable to combined iron. So far as known, the most stable and most perfect of the oxygen catalysts occurring in the animal organism contain either copper or iron. Lepinois found both manganese and iron in the oxidase of the roots and leaves of aconite and belladonna and Aso found the same to be true of the oxidase of tea leaves. According to Bach and Chodat manganese is also the active agent of the peroxidases. Some oxidases contain no manganese, but do contain iron.

It is evident, therefore, that certain metals, such as iron, manganese, or copper, one or more of them, enter into the composition of the oxygen-carriers present in the living organism as essential ingredients. These metals or their salts are capable of existing in the colloidal condition in which form they are capable of accelerating chemical processes. They may combine by adsorption with other colloids and when in such combination present many of the properties of the natural oxidases and peroxidases. Garrigou has found certain metals to exist in a colloidal condition in mineral waters. According to this author such substances possess the power of natural oxidases and to them he ascribes the beneficial results which attend the drinking of such waters and which result from more vigorous oxidations in the tissues. It seems that colloidal solutions of any metal capable of existing in two or more states of oxidation should exhibit properties similar to those shown by the oxidases. A. and L. Lumiere and Chevrotier have found that the death of animals by tetanus toxin was greatly delayed by the administration of artificial oxidases and that with a slightly acid oxidase and tetanus toxin the animal did not show the slightest sign of intoxication. Wolff has shown that certain mineral salts can play the part of peroxidases. Thus with infinitesimal amounts of colloidal ferrocyanid of iron he claims to have been able to reproduce all the reactions of the peroxidases. He points out that it acts in all respects like a natural enzyme. He also points out the important rôle that the alkalinity of the liquid plays in such oxidation phenomena. Perhaps these investigations may point the way to a better understanding of the phenomena of disease and suggest therapeutic applications which will materially enrich the armamentarium of the physician.

Medicolegal

"Chiropractor" Guilty of Practicing Without a License—Validity of Statute Conferring Power on Examining Board

The Supreme Court of Iowa says that the indictment in the case of State vs. Miller (124 N. W. R. 167) charged that the defendant "did wrongfully and unlawfully publicly profess to be a physician and assume the duties of a physician, and then and there wrongfully, falsely and unlawfully did publicly profess to cure and heal diseases, nervous disorders, displacements, injuries and ailments by means of a certain system and treatment known as chiropractic," etc.

He advertised as follows: "Dr. F. M. Miller, chiropractor. . . . Read carefully the contents of this booklet. It will interest you. The cure of disease. Cure of disease follows chiropractic adjustment because chiropractic removes the cause. Chiropractic is a distinct and complete drugless and knifeless system and has nothing in common with osteopathy, massage, Swedish movement or any other system. Chiropractic is successful in all forms of disease. This means your disease. If your case is numbered among those supposed impossibilities, do not despair. Try chiropractic and get well. . . . Chiropractic is a common-sense treatment. It will bear investigation. It is based on a correct knowledge of the nervous tissues. It adjusts all displacements and allows the innate builder to reconstruct the broken-down tissues."

The evidence showed that the defendant treated patients for a consideration, and that he professed to cure and heal diverse diseases by the use of his system. He gave no medicine, nor did he prescribe medicine. His system consisted of certain mechanical appliances which were used in connection with hand manipulations and an electric vibrator. The court cannot agree with the contention that the evidence wholly failed to show that any offense was committed by the defendant. The facts in the case brought it clearly within the construction given the statute in State vs. Edmunds, 127 Iowa, 333; State vs. Bair, 112 Iowa, 466; and State vs. Heath, 125 Iowa, 585. The cases from other jurisdictions cited by the defendant were, of course, not controlling. In fact, most of them were based on statutes unlike that of Iowa.

The trial court received testimony that the treatment given by the defendant was beneficial to some of his patients, but the jury were afterward instructed to disregard such evidence. The instruction was right.

The indictment was assailed on the ground that it charged no crime, but it charged a violation of the statute in substantially the language of the latter, and that was sufficient.

Nor does the court agree with the contention that the Iowa statute under which the prosecution was brought is unconstitutional. The only new question presented with regard to it was in the contention that it makes an unwarranted delegation of authority to the State Board of Health. The chapter under consideration provides that the Board of Medical Examiners shall consist of the physicians of the State Board of Health, and names the subjects that shall be covered by the examination. The physicians of the State Board of Health are appointed by the governor. Section 2582 of the Iowa Code and Supplement provides that all persons desiring to practice medicine in the state must submit to an examination, and also present diplomas from some medical school of recognized standing.

It was contended that the power thus given to the board of examiners might be so exercised as to exceed proper police protection, and because of such possibility the statute was unconstitutional. But a statute is not unconstitutional because it provides a board for certain purposes and gives such a board discretion. Such a statute does not discriminate against any class of citizens. Nor does it confer on the board of examiners arbitrary power, or enable it to discriminate in favor of any particular school of medicine. While the board acts within its reasonable discretion, it will be protected, but, when it seeks to go beyond that and to act illegally, the court will interfere. A medical board of examiners may prescribe reasonable rules and regulations for the conduct of its work. The statute itself furnishes no warrant for an unjust discrimination, and the courts will not presume for the purpose of holding it unconstitutional that the board will exceed its power, or do any unlawful act.

There was a conviction in this case of practicing medicine without a license, and there being no substantial error in the record, the judgment is affirmed.

Duties to Sick Seamen of Masters of Small Ships

The United States District Court, in Virginia, says, in the case of The M. E. Luckenbach (174 Fed. R. 265), a steam tug, that a fireman thereon fell sick on a voyage from Newport News, Va., to Colon, Panama, when some seven days out from Colon; that the boat stopped at Colon two days, and then proceeded to Port Antonio, consuming one day en route and remaining there one day, after which it proceeded to New York, consuming seven days, and three days later the man was sent to a hospital, where it was ascertained that he had typhoid fever. The ship's master seemed to have proceeded largely on the theory that it was the man's duty either to have gone personally to see, or to have asked for, a physician, or requested to be sent to a hospital; and to have also apparently acted on the idea, in which he may doubtless have been sincere at first, that the man was only slightly sick. But in all this he manifestly failed to recognize his obligation in the premises. It was the duty of the master to look out for the care and health of the man, whether he made a request of him so to do or not; and from the testimony it was clear that the man's condition, lasting during a period of seven days before reaching Colon, was such as to require of the master, in the exercise of that degree of care, consideration and responsibility which his position imposed on him, to see what was the character of the fever from which he was suffering, and was something as to which he could not hesitate, vacillate, speculate or take chances on. Ships the size of this one having no physician on board, the crew have to look to the master for proper care and medical treatment in matters affecting their health; and, when taken ill on a voyage, the laws of humanity require that the master, having sick members of his crew in charge, should treat them with the utmost care, kindness and consideration consistent with the circumstances in which he is placed, and see that intelligent medical assistance is furnished as soon as possible. In cases of emergency, voyages have to be deviated from; and there would certainly seem to be no good excuse why, on arrival at a port with a sick man on board, medical advice should not be had at once, and the seaman sent to a hospital, if necessary. In this case not only was the negligence of the master apparent in his failure to secure proper medical aid and hospital treatment at the earliest practicable moment, but the failure to send for a physician after the arrival of the vessel at the port of New York for a period of three days was under the circumstances inexcusable, if not inhuman. In conclusion, the court thinks that an award of $1,200 would be reasonable for the suffering that the man had been subjected to and the damages he had sustained.

What Employer's Contract for Care at Hospital Includes

The Supreme Court of Colorado says, in the personal injury case of Miller vs. Camp Bird (105 Pac. R. 1105), that the plaintiff alleged that, as a part of the contract of employment between himself and the defendant, the latter was to provide him with such medical and hospital treatment as might become necessary or proper in the treatment of any injuries he might receive in its employ. But it could not in reason be maintained that, if the defendant contracted at all, it contracted to do more than to furnish such reasonable care as the hospital at Ouray afforded. Such hospitals are not equipped with all kinds of specialists. The plaintiff would certainly not maintain that, if it became necessary for his proper treatment that he consult an eminent specialist in New York, the company was bound to furnish such specialist, either at the hospital at Ouray or in New York. It was likewise too much to say that the company was bound to furnish a specialist either at the hospital or in Denver. The company furnished such care as the hospital in Ouray afforded, and as could be reasonably expected—at least no complaint was made of it. That was all that could be required.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

April 16

1 *The Essentials of the Physiology and Pathology of Digestion. I. Levin, New York.
2 The Psychology of the Consumptive. M. Fishberg, New York.
3 *Therapeutic Drainage in 185 Cases of Uterine Obstruction. A. E. Gallant, New York.
4 *Fatal Factors in Pneumonia. G. Werley, El Paso, Tex.
5 Psychiatry and the General Practitioner. P. B. Brooks, Norwich, N. Y.
6 Anomalies and Points for the Surgeon to Bear in Mind. C. F. Disen, Brooklyn.
7 Hemorrhage after Removal of the Turbinated Bodies. J. Solow, Brooklyn.

1. **Physiology and Pathology of Digestion.**—Levin points out that the main danger to the organism lies in intoxication by foodstuffs only partially digested in the gastrointestinal tract, or by products of the metabolism of bacteria always present in every segment of the digestive organs. All these toxic substances on entering into the circulation exercise a deleterious effect on every organ of the body, skin, circulatory system, even the mind. The most remarkable illustration of the dependence of every organ of the body on the functions of the digestive organs we see in pellagra. The disease is caused by faulty corn. It begins with stomatitis, continues with gastric disturbances, then with skin lesion, and finally ends with depressive insanity.

3. Abstracted in THE JOURNAL, June 5, 1909, p. 1868.

4. **Fatal Factors in Pneumonia.**—Of all fatal factors in pneumonia, lack of early, complete and continuous rest in the horizontal position is in Werley's opinion responsible for more deaths than any other one thing. A considerable mortality from pneumonia is inevitable. But the inevitable mortality is far less than what is occurring at the present time. There is no serious infectious disease against which the body has more perfect means of natural defense. If only given a good fighting chance, a complete cure is generally effected in from 5 to 10 days without the aid (?) of any "specific" whatever. The body will take care of the pneumococcus if we take care of the body. The great fatal factors in pneumonia, he says, are, half enough water; half enough air, half enough rest; and too much meddlesome medication.

Boston Medical and Surgical Journal

April 14

8 *Treatment of Paralytic Deformity. R. W. Lovett, Boston.
9 *Diagnosis and Treatment of Peritonitis of the Upper Abdomen. J. B. Deaver, Philadelphia.
10 *Metabolism Experiment on an Infant after Gastroenterostomy for Congenital Stenosis. F. B. Talbot, Boston.
11 Chronic Primary Intussusception in the Adult (continued). H. W. Goodall, Boston.

8. Abstracted in THE JOURNAL, Oct. 9, 1909, p. 1225.

9. **Peritonitis of the Upper Abdomen.**—Withdrawal of all food by mouth, the Fowler position and continuous saline proctoclysis have become the recognized factors in the treatment of acute infections of any part of the peritoneal cavity. At the time of operation, proper drainage must be instituted at the operative site, and it is Deaver's practice in all cases of diffuse or diffusing upper abdominal peritonitis, to insert a glass tube into the pelvis through a suprapubic stab wound. Whatever methods may be chosen, he says, the fact remains that in early diagnosis and early treatment we may be successful; if we allow our cases to progress, the issue must be fatal.

10. **Metabolism Experiment After Gastroenterostomy.**—A male baby, aged 6 weeks, was operated on for congenital stenosis of the pylorus. At the age of 5½ months the baby weighed 12 pounds 12 ounces, having gained 4 pounds since operation. The stools were gathered on November 12, 13, 14, a period of three days, and samples of the milk ingested on November 11, 12, 13, 14, were analyzed for fat and nitrogen. The analyses are recorded in tables. The figures indicate that the digestion and absorption of the fat and nitrogen were normal in this baby three and one-half months after the operation, and they are evidence that the operation of gastroenterostomy does not change the powers of digestion of these two food components and agree with the results published by Talbot in earlier investigations.

New York Medical Journal

April 9

12 *The Cammidge Reaction in the Urine. J. M. Swan and J. J. Gilbride, Philadelphia.
13 Urethrotomy. T. M. Townsend and J. J. Valentine, New York.
14 Acquired Syphilis in an Hereditary Luetic. O. L. Suggett, St. Louis.
15 Differential Diagnosis of Locomotor Ataxia. C. W. Burr, Philadelphia.
16 *Disease of the Hypophysis. F. W. Marlow, Syracuse, N. Y.
17 Infant Mortality in Obstetric Practice. I. L. Hill, New York.
18 Tuberculosis of the Hip Joint. I. D. Steinhardt, New York.
19 Principles of Roentgenotherapy. S. Tousey, New York.

12. **Cammidge Reaction.**—An experience with two cases caused Swan and Gilbride to make a study of numerous cases to determine the frequency of the occurrence of this reaction and its bearing on the diagnosis of pancreatic disease. While, as a rule, they selected patients for the purpose of this study who presented abdominal symptoms, they also performed the test in a number of cases in which the patients presented no such symptoms. They found the Cammidge reaction positive in 3 cases of pancreatic disease, in 2 cases of carcinoma of the pancreas, and in a variety of diseases besides those of the pancreas, as diagnosticated by clinical methods alone. Many of the patients were suffering from diseases of the abdominal organs; 21 out of 47, such as cholecystitis, carcinoma of the stomach and typhoid.

In many other cases in which a positive reaction was found, such as varicose ulcer of the leg, fracture of the leg, burns of the thighs, sarcoma of the inguinal lymph nodes, and valvular heart disease, arteriosclerotic processes were progressing in the patients, and enough disturbance of the circulation in the pancreas might easily have resulted so that the substance which gives the reaction would have been formed and excreted. Swan and Gilbride think it a mistake to interpret every positive Cammidge reaction as indicative of organic disease of the pancreas. They believe that the positive reaction indicates a disturbed pancreatic function, and that the substance in the urine which produces the crystals results either from disorder of the pancreatic secretion or from the elimination of small quantities of maltose or other disaccharid.

The Cammidge reaction, they say, should never be used as a guide to the performance of an operation unless the test with phenylhydrazin hydrochlorid has been done and has failed to produce in crystals. If this reaction gives no crystals and the Cammidge reaction is still positive and the patient complains of upper abdominal symptoms, particularly pain, the reaction may be looked on as a link in the chain of evidence pointing either to pancreatic disease, disease of the gall-bladder, or disease of some neighboring organ. In the absence of such symptoms the presence of the reaction even with absence of m crystals in the phenylhydrazin hydrochlorid tube should be looked on merely as an interesting discovery.

16. **Disease of the Hypophysis.**—Briefly summed up Marlow's patient, a woman, presented the following symptoms: Amenorrhea, polyuria (6 quarts in 24 hours); some thirst; some headache; numbness of the hands; and increase in fat; in addition to the peculiar defect in vision which led to the diagnosis of the disease. Her symptoms were accounted for by assuming an increase in the size of the hypophysis with a diminution of the functional activity of its anterior lobe. The assumption of increase in size was necessary to account for the visual symptoms which surely point to pressure on the chiasm. Marlow regards it as probable that the disease is either of the nature of a new growth or that cystic disease of

the anterior lobe is present, for either of these conditions would tend to diminish its functional activity. Chief interest in the case, however, lies in the marked improvement in vision which occurred after the administration of thyroid extract; the improvement, however, being limited to the visual acuteness and to the diminution of headache; the polyuria, amenorrhea and adiposity continuing.

Medical Fortnightly, St. Louis

March 25

20 Rational Treatment of Typhoid. G. L. Servoss, Fairview, Nev.
21 The Physical Basis of Life; Query. J. Clements, Wichita, Kan.
22 Pyuria in Latent Genito-urinary Lesions. F. C. Walsh, San Antonio.
23 Advantages of the Urine Examination. H. R. Harrower, Chicago.

Wisconsin Medical Journal, Milwaukee

March

24 Rôle of the Practicing Physician in the Defense of Medical Research. J. Erlanger, Madison.
25 Reminiscences of Some of the Earlier Medical Practice in Wisconsin. G. W. Jenkins, Kilbourn.
26 Decompression as a Primary Procedure in the Treatment of Intracranial Lesions. C. H. Lemon, Milwaukee.
27 The Eye as a Factor in the Diagnosis of Increased Intracranial Tension. N. M. Black, Milwaukee.
28 Pellagra. C. F. North, Beaver Dam.

Montreal Medical Journal

March

29 Demonstration of the Trachoma Bodies. S. H. McKee, Montreal.
30 Tabes Dorsalis and the *Ersatz-Theorie*. C. K. Russel, Montreal.
31 A Critical Estimate of the Medical Education of the Day with Suggestions for the Reorganization of the Physiologic Department of McGill University. W. Mills, Montreal.
32 Louise Boureois and Some Others. H. M. Little, Montreal.
33 Five Cases of Tuberculosis of and About the Eyes. R. Kerry, Montreal.

The Journal of Nervous and Mental Diseases, Lancaster, Pa.

March

34 *Protracted Cerebrospinal Syphilis with Striking Intermittency of Symptoms. J. J. Putnam and E. E. Southard, Boston, and A. H. Ruggles, Providence.
35 *Paralysis Following Relapses and Second Attacks of Diphtheria. J. D. Rolleston, London, Eng.
36 The Spasmodic Type of Syringomyelia. G. W. Howland, London.

34. **Protracted Cerebrospinal Syphilis.**—The varied problems and considerations of this case may be presented as follows: A protracted case of cerebrospinal syphilis shows at the end of 16 years after infection and 11 years after initial nerve symptoms, a multiplicity of chronic lesions, but shows few acute lesions. Search for spirochetes so far has been negative. On the basis of gross and histologic findings, the authors regard it as possible to correlate many of the various clinical features: (a) transverse myelitis, (b) intermittent cranial nerve and other symptoms with structural disorder. But there were hysterical tendencies throughout which rendered exact correlations difficult *intra vitam*. The intermittency of symptoms was striking and an enumeration of histologic possibilities is given which might account for this intermittency (acute and reparative changes in the pia mater; cellular and fibrillar gliosis, whether nuclear, periradicular, or, in some cases, intraradicular; and the corset-like contraction of whole regions subject to sclerosis, with consequent herniation of small bits of nerve tissue).

The intermittency and varied structural origin of the symptoms as well as the maintenance to the last of acute changes were reasons for optimism, the authors believed, in pushing antisyphilitic treatment. Incidentally, the postmortem data show how lumbar puncture might fail to reveal lymphocytes in cerebrospinal syphilis, provided that there is an occlusion of the intermeningeal space by adhesions above the point of puncture. The case presented a kind of reversal of the biologic tendency that the structures later evolved shall be destroyed first, since the course of lesions in this case was largely ascending throughout and the cerebral cortex was left at the last a species of shell from which the lower functioning mechanisms had been successfully scooped out by disease.

35. **Paralysis Following Diphtheria.**—In this paper, which is based on personal observations made on 1,600 complete cases of diphtheria at the Grove Hospital, an artificial distinction is made between relapses and second attacks. By a "relapse" is meant the reappearance of the disease after recovery from the initial attack, but before discharge of patient from hospital. The term "second attack" is applied to cases in which the two illnesses did not occur during a single period of detention in hospital. In all the relapses and second attacks as well as in the primary disease, the clinical diagnosis received bacteriologic confirmation, so as to exclude those cases of non-specific tonsillitis, which are not infrequent in convalescence from diphtheria.

In the 1,600 patients 27, or 1.6 per cent., had relapses, which were separated from the initial angina by intervals ranging from 3 to 14 weeks. The average date for their occurrence was about the middle of the sixth week. Two of the 27 had palatal and ocular palsies after the primary attack, but none showed any signs of paralysis after the relapse. Thirty-six, or 2.2 per cent., had second attacks, between which and the first there were intervals ranging from 3 months to 14 years. The period of predilection was the first 3 years, during which 22 of the 36 took place. In 18 the first attack had occurred in the same hospital, so that the records were available. One of the patients had paralysis during the first attack only, and 3 had paralysis during the second illness who had previously escaped any nervous sequelæ. In only one patient were both attacks followed by paralysis. Rolleston insists on the fact universally accepted by the physicians of large fever hospitals, but contested by some neurologists, that the frequency and severity of diphtheritic paralysis bear a direct relation to the initial angina. The partial immunity conferred by the primary attack and the initial dose of antitoxin was the cause of none of the relapses, displaying those features of malignancy which are manifested by severe local symptoms, deficient reaction to antitoxin and a high mortality, and are followed by a precocious paralysis, which in survivors is of unusually long duration. Second attacks, on the other hand, do not always run a mild course, since 5 such patients had severe local symptoms, and 2 developed paralysis, in one case fatal. It would seem that the immunity conferred by the first attack had been exhausted owing to the length of the interval which in these 5 cases ranged from 1 to 3 years.

Journal Arkansas Medical Society, Little Rock

March

37 Uremia. J. A. Moore, Lisbon.
38 Education of the Laity. J. S. Jenkins, Pine Bluff.
39 Typhoid Fever. E. R. Dibrell, Little Rock.

St. Louis Medical Review

March

40 The Abuse of Medical Charities in Chicago. C. J. Whalen, Chicago.
41 The Influence on Phagocytosis of Alterations in the Osmotic Tension of the Serum and of Electrolytes and of Non-Electrolytes. O. H. Brown, St. Louis.
42 Tuberculous Lesions Illustrated by the Roentgen Rays. R. H. Boggs, Pittsburg, Pa.
43 Tuberculosis. J. V. Shoemaker, Philadelphia.

American Journal of Medical Sciences, Philadelphia

April

44 *Certain Vasomotor, Sensory, and Muscular Phenomena Associated with Cervical Rib. W. Osler, Oxford, Eng.
45 *Functions of the Pituitary Body. H. Cushing, Baltimore.
46 *An Acute Infectious Disease of Unknown Origin. N. E. Brill, New York.
47 *Adams-Stokes Syndrome of Prolonged Duration, ending in Apparent Recovery. H. C. Earnshaw, Rosemont, Pa.
48 *Two Cases of Cardiac Death. J. D. Heard, Pittsburg.
49 Influenzal Septicemia. J. D. Madison, Milwaukee.
50 *Acute Pneumococcus Meningitis. E. F. McCampbell and G. A. Rowland, Columbus, Ohio.
51 Serous Meningitis in Typhoid: Treatment by Lumbar Puncture. R. Stein, New York.
52 *Tumors of the Acoustic Nerve, their Symptoms and Surgical Treatment. M. A. Starr, New York.
53 *Treatment of Hemorrhage of the Spleen. J. G. Sheldon, Kansas City, Mo.

44. **Cervical Rib.**—Osler refers to such symptoms as redness, pain and stiffness of the arm on exertion, the origin of which was shrouded in mystery till the *x*-ray disclosed a cervical rib. In many cases the subclavian artery has been compressed in the angle between the rib and the scalenus anticus. When at rest, and with very slight muscular effort, enough blood reaches the limb, but the demand for more blood which follows exertion is not met, and there is stiffness and numbness with vascular changes. So marked may these latter be, says

Osler, that there are cases reported suggesting Raynaud's disease, and in at least seven instances local gangrene has followed. In a few cases, dilatation of the vessel, a cylindrical aneurism, or even a sacculated tumor has been present.

45. **The Functions of the Pituitary Body.**—The pituitary body is a double organ in the sense that the secretion of its anterior and solidly epithelial portion discharges into the blood sinuses which traverse this part of the gland; whereas the hyaline substance, apparently the product of secretion from the epithelial investment of the posterior lobe, enters the cerebrospinal space by way of channels in the pars nervosa. Though possessing a physiologically active principle, as shown by the results of injections, the secretion of the posterior lobe does not seem to be so vitally essential to physiologic equilibrium as that of the anterior lobe, the total removal of which leads to death with a peculiar train of symptoms which set in at an early date in the adult and after a longer interval in younger animals. Alterations in the gland, which often ultimately assume the character of a malignant growth (adenoma) but which presumably at least in their earlier stages, represent an hypertrophy, are common in clinical conditions of overgrowth (acromegaly and gigantism), and certain feeding experiments lend support to the view that these clinical states represent the consequence of hyperactivity of the pars anterior. Partial removals of the anterior lobe usually lead to obvious disturbances of metabolism often accompanied by adiposity, and in the young by a persistence of infantilism, or in adults by a tendency to lose the secondary sexual characteristics. Cushing regards it as probable that certain of the symptoms known to accompany hypophyseal disease may be consequent on a secondary change in other glands which follows the primary lesion of the hypophysis. These changes are seemingly more outspoken and more widespread after a lesion of the pituitary body than after a corresponding lesion of any other individual member of the group of ductless glands, and in view of its unusually well-protected position one might have conjectured that it must represent a vitally important organ.

46. **Acute Infectious Disease of Unknown Origin.**—Brill's paper is based on a careful clinical study of 221 patients suffering from an acute infectious disease, which was begun in 1896, and carried on since then. At that time, with a fairly large typhoid service at Mount Sinai Hospital, he noticed a type of disease occurring mainly in the summer and fall months, somewhat similar but characterized by many features irreconcilable to the picture of typhoid, such as the course (being 12 to 14 days), the temperature descent, which was mostly by crisis, the eruption, which was maculopapular and did not disappear on pressure, and the absence of the Widal reaction in this group. The disease is characterized by a short incubation period (4 or 5 days), a period of continuous fever, accompanied by intense headache, apathy and prostration, a profuse and extensive erythematous maculopapular eruption, all of about 2 weeks' duration, whereon the fever abruptly ceases either by crises within a few hours or by rapid lysis within 3 days, when all symptoms disappear. There was no evidence of the disease being directly communicable. The evidence of infection by the recovery of the offending organism in this disease is entirely wanting. The prognosis is invariably good, no deaths occurred in this series. The treatment is entirely symptomatic.

47. **Adams-Stokes Syndrome.**—The case which Earnshaw reports is that of an individual who has suffered from a number of prolonged attacks of complete auriculoventricular heart block, and who made what for a time appeared to be a perfect recovery; but very recently he suffered a recurrence of the heart-block that lasted several days and then disappeared. During the first attack nitroglycerin was given, 1/200 gr. every 2 hours. This drug was also used for a time during the second attack. There did not seem to be any effect from its use on the pulse rate. Strychnin sulphate was used in all the attacks for its general tonic effect. Morphin and oxygen were used. Counterirritation to the epigastrium in the form of a mustard plaster, infusion of scoparius, quinin, caffein, massage, potassium iodid, aromatic spirits of ammonia, cocain and cerium oxalate were also used. The patient's condition remained unchanged. Strychnin nitrate, 1/30 grain, was ordered thrice daily, and was continued for a month when it was withdrawn gradually. After a week there was no evidence of heart-block. Whether the administration of strychnin nitrate had any direct effect in causing the heart-block to disappear, Earnshaw was unable to determine. The patient had been taking strychnin sulphate, earlier in the attack, for a long time without any apparent benefit; but immediately following the administration of the nitrate the heart-block began to disappear in a most pronounced and dramatic manner. The most reasonable explanation which we have been able to formulate in explanation of the present case has been a vasomotor one, probably engrafted on some sclerotic change in the bundle of His, or its nutrient vessels. It is conceivable that if for some reason the blood supply of the bundle was temporarily cut off or diminished, it would cease functionating so long as the anemia kept up, and again take on its normal activity when its blood supply was reestablished. That there may have been some such diminution of blood supply resulting from round-cell infiltration, arterial spasm, or constriction, or alteration in local blood-pressure would be nearly as difficult to deny as it would be to prove. At all events, Earnshaw regards this as the most rational explanation which can be offered to explain the case in question.

48. **Cardiac Death.**—The first case cited by Heard appears to be a typical one of cardiac death occurring in convalescence from diphtheria. The second patient was 54 years old. She had been a healthy child up until her ninth year, at which time she had an attack of scarlet fever, moderate in its severity. There were apparently no complications, and she was subsequently in good health until 3 years later, when she passed through a severe attack of diphtheria. She was confined to bed for 4 months. The cause of this protracted illness is unknown, but the family states definitely that there were no paralyses. A short time after she was able to be on her feet again, she began to suffer from severe attacks of asthma, usually lasting 3 or 4 days. During the intermissions, of several weeks' duration, she was entirely free from respiratory disorder. She never, however, regained her previous bodily strength. When 20 years of age, she began for the first time to complain of palpitation during her asthmatic attacks, although she continued free from cardiac symptoms during the intermissions. Following a change of dwelling to a somewhat higher altitude, the attacks of asthma and palpitation greatly diminished in frequency, and she had comparative freedom for nearly 12 years, when the symptoms of cardiac insufficiency began to return and to assume the major rôle. She still had attacks of asthma and suffered from bronchitis and emphysema; but the heart was evidently somewhat crippled at this time, for she was very short of breath on exertion, and edema set in. There were frequent attacks of tachycardia, and the family later began to notice a dusky color about her lips and fingers. Her asthmatic attacks were comparatively infrequent from this time on, but the cyanosis became so marked that a sister described her as having times when her hands would be "black to the knuckles." The latter condition set in about 2 years before her death, and had no relation with the attacks of dyspnea. During the last few months there were "two occasions when the forehead and cheeks were almost black." She complained of dyspeptic symptoms and pain in the right hypochondrium. During the 2 months before her death, her sister noticed a throbbing of the veins of the neck—this an independent observation and not the result of a leading question. The skin was always sallow. She began to be apathetic, but in spite of her discomfort, was able to attend to light duties about the house.

The important point to be considered is, whether a myocarditis arising in childhood could affect the heart during so long a period as 42 years. It may be concluded with a fair degree of certainty that the cause of death was incompetence of a heart muscle, probably the seat of a chronic myocarditis. This conditon may have originated at the time of the infection with diphtheria during childhood, or, at least, the soil may have been prepared at that time for subsequent cardiac disease. That the scarlatinal infection may have exerted some unfavorable influence cannot, of course, be denied. At any rate, owing to repeated strain and in various unfavorable

conditions there gradually developed the incompetence of the muscle for the work required of it. Dilatation of the right ventricle set in with relative insufficiency of the tricuspid valves; the fatal end was precipitated by a sudden increase in resistance in the pulmonary circuit, with possibly a further weakening of the muscle as a result of the action of the toxic products of a pneumococcus infection.

50. **Pneumococcus Meningitis.**—This case is typical of practically all cases of pneumococcus meningitis. The following points may be noted in regard to this disease: (1) its virulent and fatal character; 99 per cent. of all patients die; (2) the greenish-yellow character of the exudate which is markedly cellular and fibrinous in constitution; (3) the polymorphonuclear and endothelial cell infiltration of the cortex of the brain—this change is, on the whole, less marked than in the other forms of meningitis; (4) the increase in neuroglia in the subpia and in the cranial nerves; (5) the infiltration of the walls of the arteries with leucocytes and exudate, causing a spreading apart of the intima and media and in addition the infiltration of the veins with leucocytes.

52. **Tumors of the Acoustic Nerve.**—The study of the nature of the tumors found and removed has an important bearing on the prognosis in operations for brain tumor. A recent study of the pathology of acoustic tumors by F. Henschen, quoted by Starr, has shown that of 145 such tumors examined, 133 were solitary and 12 were multiple. It is interesting to note that a majority of the solitary tumors were fibromas, fibrosarcomas, or cysts, encapsulated, non-adherent, and from the standpoint of the pathologist, removable surgically. It is evident, therefore, that the danger of relapse after operation for an acoustic tumor is far less than in cases of tumor elsewhere. Henchen calls attention to the fact that the acoustic nerve is the only cranial nerve frequently affected by a tumor. He brings this fact into relation with the observation that in embryonal growth the bone tissue which surrounds the acoustic nerve is formed later than that about the other cranial nerves, at their exit, and hence that embryonal connective tissue persists around this nerve later than elsewhere. He shows that tumors of this nerve usually (in 8 cases out of 9 examined by him) have a small pedicle entering the acoustic foramen or internal auditory meatus, the nature of which is fibrous, and he suggests that it is the proliferation of this fibrous embryonal connective tissue which gives rise to the tumor. In 83 of the 145 cases examined by him, such fibrous tissue was found in the tumor. The possibility of such multiple tumors must always be regarded, Starr says, in making a diagnosis, especially as symptoms referable to the cranial nerves on both sides have not infrequently been observed, but bilateral symptoms do not always indicate multiple tumors. In cases with autopsy it has been found that pressure on the tumor on one side not only implicated the nerves on that side, but also displaced the pons and medulla toward the side so as to cause compression of the cranial nerves on the side opposite to the tumor, thus producing the bilateral symptoms. This fact should not, therefore, preclude operation.

53. **Hemorrhage of the Spleen.**—The procedure described for the treatment of wounds of the spleen consists of the application to the splenic pedicle of a large flexible clamp, the blades of which are protected with rubber tubing, tightly enough to occlude the vessels, but not to crush them. This clamp protrudes through the abdominal incision and is left in place for four hours. Then it is unlocked. If no bleeding occurs—as can be determined by the appearance of fresh blood in the wound, and the condition of the patient—the clamp is removed. The splenic wound is not treated in any way. After the splenic circulation has been shut off by the clamp, the vessels in the splenic wound empty themselves by draining into the peritoneal cavity, and their cut ends are occluded by Nature firmly enough in four hours to prevent bleeding, when the splenic circulation is reestablished by removing the clamp. If the wounded splenic vessels are prevented from emptying themselves, which can be done by tamponing or suturing the wound, the thrombosis started at the splenic wounds extends to the clamp on the pedicle and prevents the reestablishment of the splenic circulation after the clamp has been removed

Archives of Pediatrics, New York

March

54 The Cutaneous Tuberculin Test. C. F. von Pirquet, Baltimore.
55 *The Stools of the New-Born Infant and Their Significance. T. S. Southworth, New York.
56 Pneumothorax: Clinical and Radiographic Study. F. Huber and I. S. Hirsch, New York.
57 Regulation of Fat Percentages in Infant Feeding. A. S. Bleyer, St. Louis.
58 Scarlet Fever Prophylaxis. R. M. Smith, Boston.

55. Abstracted in THE JOURNAL, July 10, 1909, p. 140.

Washington Medical Annals

March

59 Treatment of Postoperative Adhesions. A. L. Stavely, Washington, D. C.
60 Chronic Headache—Neurologic Advances Regarding its Diagnosis and Treatment. T. A. Williams, Washington, D. C.
61 *Gall-Stone Diabetes: Case and Specimen. W. P. Carr, Washington, D. C.
62 A Review in Therapeutics. N. P. Barnes, Washington, D. C.
63 Ulcer of the Duodenum: Case and Specimen. E. A. Balloch, Washington, D. C.
64 Sarcoma of Kidney in a Child Sixteen Months Old. J. R. Wellington, Washington, D. C.
65 Adenocarcinoma of the Transverse Colon: Obstruction: Resection to Cecum and Colon; Enteroanastomosis. E. A. Balloch, Washington, D. C.
66 *A Convenient Instrument for Ready Clinical Investigation of the Sensibility to Coolness and Warmth. T. A. Williams, Washington, D. C.
67 *Measles and Mice: Does the Microbe Come from the Mouse? A. F. A. King, Washington, D. C.
68 Cases of Gall-Stones. A. L. Stavely, Washington, D. C.
69 Case of Fatal Mastoiditis. W. K. Butler, Washington, D. C.
70 The General Practitioner and the Surgeon. W. A. Jack, Washington, D. C.

61. **Gall-Stone Diabetes.**—Carr urges that the occurrence of sugar in the urine should lead one to examine very carefully into the condition of the bile ducts and pancreas. In his case the diabetes was unquestionably due to a pancreatitis caused by pressure of a large gall-stone. The symptoms of gall-stone disease were typical, but antedated the operation only three months. At the operation the adhesions about the gall-bladder seemed to be at least a year or two old. There were many old and firm adhesions around the gall-bladder, especially between it and the greater omentum. The gall-bladder was distended with about 8 ounces of rather pale, ropy bile, and a single large gall-stone about the size and shape of an English walnut was found in the common duct. The head of the pancreas was slightly enlarged and somewhat harder than the body of the organ. Careful search was made for other causes of obstruction, but none were found. Bile did not flow into the glall-bladder for some time, but did flow pretty freely before the wound was closed. The stone was evidently formed by the amalgamation of a number of smaller stones, and must have required a long time to form and to work down into the common duct.

66. **Investigation of Sensibility to Temperature.**—For estimating degrees of sensibility, Williams employs an apparatus consisting of a cube of cast copper, 3 x 3 x 3 centimeters, tunneled out in the center to within 2 millimeters of the opposite surface. Into the tunnel is inserted the bulb of a thermometer of the kind used in storage warehouses. It registers from 10 to 140° F. The whole is mounted on a wooden holder along a groove in which the thermometer is embedded for protection. The scale is easy to read, as it lies in the furrow. For convenience of manufacture, the copper block is made in two equal parts, furrowed in such a way that the approximation of the grooves forms a circular tunnel for the thermometer. The two halves are clamped together with four copper screws; and the whole is in turn screwed to a strip of brass ⅛-inch thick and 3 centimeters wide. The brass fits along a beveled-cut surface of the block, which extends to within 2 millimeters of the foot. The brass strip is screwed also to the wooden handle which carries the thermometer scale, thus making the whole solid and giving a uniform surface of copper to place against the skin of the patient being examined. To use the instrument, it is plunged into a large jug of water at a temperature approximating to that desired, say 25 C. when testing for appreciation of coolness, or 40 C., when testing the appreciation of warmth. It is very easy, by adding cold water or hot water, to obtain any temperature desired in the large vessel; and this will remain practically constant long enough to enable a series of observations to be taken sufficiently complete for current clinical use.

67. **Measles and Mice.**—Numerous instances are on record in which measles seem to have originated from contact with straw. In recently investigating a supposed *de novo* case of measles in Washington it was found that the patient, a girl, got measles after playing in the loft of the White House stables (a mile or more from her home), where she had gone to play with the children (who had got the disease at the same time) of the stableman. The loft contained straw and hay, in which there was "any quantity of mice," so the stableman stated. King recalls that his brother and himself, when respectively 10 and 11 years of age, were attacked with measles after spending several hours helping kill mice on a wheat rick that was being taken into the barn and which was swarming with these rodents. There were no other measles cases among the neighbors and schoolmates. Some years ago, a box of china packed in straw was received in his own house. While unpacking it he could not get rid of the idea that there was measles in the straw. It was probably a subconscious olfactory impression, but so pronounced that, fearing his own children (who were then very young) might get the disease, he had the box and packing burned up without delay. His children escaped, but some days later it was learned that the relatives in whose house the china had been packed was in bed with measles. Many other similar incidents are cited which point to a possible etiologic relationship between mice and measles.

While the evidence thus presented in support of the etiologic relation between measles and mice is, for the most part only probable or presumptive, how, asks King, shall positive evidence be obtained by experiment? Hitherto the experimental production of measles artificially has been done by inoculation—by inoculating non-immunes with blood, mucus, tears, etc., taken form measles patients. But this is not the method by which the disease is naturally acquired. Measles is not produced by inoculating wounds, neither by the bites of insects nor by traumatism of any kind. The initial symptoms—cough, sneezing, coryza, sore throat, lacrimation, etc., all indicate infection by a spore-laden (probably in *de novo* cases, by a dust-laden) atmosphere. Thus, if we admit the mouse excreta to be the original source of measles it is easy to conceive that these excreta, when dried by the warmth of our houses, crushed by passing feet on the floor and dispersed by housemaids' brooms into the air, can in this way come in contact with the respiratory and other mucous surfaces.

King suggests that a sufficient quantity of intestinal concretions from the mouse should be reduced to fine powder, and then diffused through the air, to be inspired by non-immune children of a suitable age (not younger than 8 years). In a supposed *de novo* case recently investigated King found that the child got measles, without having been exposed to contagion by inhaling dust made by the mother sweeping out a very dusty cellar in a house she had just begun to occupy. At least this is the only available explanation of the case. It seems to be similar in origin to the cases produced by inhaling dust from mouse-infected wheat-ricks and stable straw mentioned in this paper.

Alabama Medical Journal, Birmingham

March

71 *The Physician—His Attitude Toward, and his Obligation to, his Patients, His Confrères, and to Himself. J. F. Alexander, Blocton.
72 Hookworm Disease. C. P. Martin, Woodstock.
73 Clinical Types of Pellagra. C. M. Rudolph, Birmingham.
74 One Hundred Obstetric Cases: Their More Important Complications, including a Successful Cesarean Section. W. A. Weed, Republic.
75 Supernumerary Uterus in a Girl Eighteen Years Old: Removal: Recovery. E. M. Robinson, Birmingham.

71. **The Doctor.**—The physician's attitude toward and his obligations to his patients, his confrères and to himself, are, in Alexander's opinion, somewhat as follows: To his patients. —The physician must hold himself in constant readiness to respond, fully equipped for emergencies, to calls to attend the injured or ill. He cannot be equipped with only pencil and a prescription pad. He must carry with him the instruments and medicines which may be urgently demanded. He must keep always before him the greatness of his mission and with a sense of the responsibilities he incurs when he proclaims himself a safe guide and counsellor. Visits should be made frequently enough to remain completely the master of the situation, as regards diagnosis, treatment and prognosis, but no visit should be made unnecessarily. The physician owes it to his patient to suggest improvements in his method of life and morals, and he can do this under the guise of professional advice so that the patient will never imagine that the advice is anything but medical. Physicians are frequently witnesses of injury to health and destruction of life by the nostrums and quack medicines so freely advertised and sold. It is their duty to warn their patients against the use of such "dope" and to explain to them why such preparations cannot be of universal service. The false and extravagant claims made for them should be denied and the reasons why they cannot perform the miraculous cures set forth in the "testimonials" should be made plain. The physician should inform himself, so far as possible, on the constituents of such nostrums, so that he may be able to combat intelligently the prejudices of his patients, who have been hypnotized by the startling language of the advertisement and the false records of cures.

To his confrères.—The medical profession, because of the circumstances surrounding the practice of medicine, has developed a special set of rules for the government of their fellowship, and this has been called the Principles of Medical Ethics. If all complied with the simple precepts there outlined, there would be no injustice, no malice, no jealousy, no envy, no hatred, no heart aches; for all men would be truly brothers, who would perish before they would work or think a wrong toward others. This code is merely the golden rule, amplified and adapted to the vicissitudes and perplexing situations so common in the practice of medicine.

The physician's attitude toward, and his obligations to himself.—Too many of us live and work as if our minds and bodies had no rights which we were bound to respect. Disciples of Æsculapius and votaries of Hygeia, we preach their precepts to the laity, but disdain and violate fundamental rules in our daily conduct and every-day life. We have no regular hours for meals, rest, recreation or sleep; we continue our exertions many times when mentally and physically exhausted; we endure all the exposure the country farmer or laboring man undergoes, and generally without adequate clothing; we are careless in collecting the fees we have earned through such privations. We owe a duty to ourselves in the matter of observance of the rules of health. The privations and hardships of the most arduous and exacting practice can be mollified, if we but appreciate this egoistic duty and plan to fulfil it. The physician cannot afford to be ill.

Maryland Medical Journal, Baltimore

April

76 *Diagnosis and Treatment of Tuberculous Peritonitis. R. Winslow, Baltimore.
77 John Hunter (1728-1821). H. M. Cohen, Baltimore.
78 Malpighi and His Writings. W. R. Stokes, Baltimore.
79 *State Boards and High Entrance Requirements. H. Harlan, Baltimore.

76. **Tuberculous Peritonitis.**—While some patients with tuberculous peritonitis undoubtedly recover without surgical intervention, Winslow believes that there is always the doubt as to the correctness of the diagnosis. Not all cases are appropriate for surgical operation, but great benefit and permanent cure follows laparotomy in at least 50 per cent. of suitable cases. The cases in which there is free fluid in the peritoneal sac, with little or no evidence of disease elsewhere, are best treated by surgical methods; the adhesive forms sometimes are cured by laparotomy, but in a much smaller proportion of cases. After the patient has been subjected to surgical treatment, all other measures of a hygienic, climatic and medicinal character that have been found useful in pulmonary tuberculosis should be employed.

79. Abstracted in THE JOURNAL April 16, 1910, p. 1332.

American Medicine, New York

March

80 Why we are What we are—The Proper Function of the Medical Society. R. W. Wilcox, New York.
81 The Eloquence of Infancy. L. Kerr, Brooklyn.
82 Points of Importance in the Performance of Vaginal Fixation. S. W. Bandler.
83 Acute Infective Osteomyelitis. D. C. Hilton, Lincoln, Neb.
84 Successful Cases of Puerperal Eclampsia. R. E. Coughlin, Brooklyn.

American Journal of Urology, New York

March

85 Stricture of the Male Urethra: Dilatation as a Means of Treatment. V. C. Pedersen, New York.
86 Etiology and Symptomatology of Chronic Prostatitis: Report of 521 Cases and a Statistical Analysis of 1,788 Cases. H. A. Moore, Indianapolis.
87 Persistence of Urinary Fistula in two Cases in which it was Thought that the Whole Kidney had been Removed by Nephrectomy. F. S. Watson, Boston.

Atlanta Journal-Record of Medicine

March

88 The Physician's Duty to the Public. J. G. Palmer, Opelika, Ala.
89 Postoperative Ileus and its Treatment. W. L. Cooke, Columbus.
90 Use and Abuse of Specific Treatment in Tuberculosis. L. C. Rouglin, Atlanta.
91 Tonsillectomy. H. M. Lokey, Atlanta.
92 The Pathology and Surgical Treatment of Cholelithiasis. H. S. Bruce, Opelika.

Pennsylvania Medical Journal, Athens

March

93 *Modern Operations for the Cure of Inguinal and Femoral Hernia. J. H. Gibbon, Philadelphia.
94 Umbilical and Postoperative Hernias. J. J. Buchanan, Pittsburg.
95 *Conservative Surgery in Ocular Injuries. L. W. Fox, Philadelphia.
96 *The Futility of Administering Antirheumatic Remedies in Patients Suffering from Painful Joints. H. R. M. Landis and C. Muschlitz, Philadelphia.
97 *Joint Diseases versus Rheumatism. DeF. Willard, Philadelphia.
98 Presenile Syphilitic Cataract. E. Stieren, Pittsburg.
99 Patent Thyrolingual Duct and its Diseases: Use of *X*-Rays. J. H. Comroe, York.

93. **Modern Operations for Inguinal and Femoral Hernia.**—Gibbon is of the opinion that the Bassini operation is now the most universally employed operation for hernia. Among the recent improvements should be mentioned the overlapping of the facial layers, as suggested by E. Wyllys Andrews. In old people, in whom the muscles are attenuated and the hernial opening large, this overlapping is necessary. The Ferguson method has the advantage of being of simpler performance, and requiring less time than the Bassini operation. It is particularly useful in cases of strangulated hernia and in cases complicated by an undescended testis. Important in any operation for hernia is the complete removal of the sac; failure to do this is responsible for many recurrences. The separation of the sac from the cord is best accomplished by first opening the sac. Iodized or chromicized catgut, Gibbons believes, is the best suture material. In operating for inguinal hernia on the right side the appendix can, as a rule, be removed easily and in children especially, he states, is a good practice. Direct hernia is much more difficult to cure than the oblique variety. The Bloodgood method of transplanting the sheath of the rectus gives the best results. The secret of success for femoral hernia lies in the complete removal of the sac rather than the method of closing the femoral canal. Infiltration anesthesia he considers particularly useful in cases in which a general anesthetic is contraindicated, and in cases of strangulated hernia. No truss should be worn after an operation for the cure of hernia, unless there is evidence of recurrence.

95. Abstracted in THE JOURNAL, Nov. 6, 1909, p. 1590.

96. Published in the *Therapeutic Gazette*, March, 1900.

97. Abstracted in THE JOURNAL, Nov. 13, 1909, p. 1672.

Medical Herald, St. Joseph, Mo.

March

100 *The Bacteriologic Diagnosis of Epidemic Cerebrospinal Meningitis. S. R. Hopkins, Omaha.
101 *Scientific Feeding. M. A. McLintock, Atchison, Kan.
102 The Neglected Anus. D. T. Quigley, North Platte, Neb.
103 *Does the Present Conservatism in Pelvic Surgery Serve the Best Interest of the Patient? B. A. McDermott, Omaha.
104 The Objects of Mechanical and Surgical Treatment of Infantile Paralysis. H. W. Orr, Lincoln, Neb.
105 Borderland Mental Cases. C. R. Woodson, St. Joseph.
106 Treatment of Chronic Nephritis with Sodium Carbonate and Uremic Convulsions with Calcium. C. F. d'J. A. Francis, Brooklyn.

100, 101, 103. Abstracted in THE JOURNAL, Oct. 2, 1909, pp. 1127, 1128.

Cleveland Medical Journal

April

107 Traumatic Neuroses from a Medical Point of View. A. Church, Chicago.
108 The Pharmacopeia and its Revision. J. P. Remington, Philadelphia
109 The Coming Revision of the U. S. Pharmacopeia. T. Sollmann, Cleveland.
110 Care of Children after an Operation on the Tonsils and Adenoid Tissue. J. M. Ingersoll, Cleveland.
111 *Normal Saline Solution as a Dressing in Casualty Surgery. G. E. Follansbee, Cleveland.
112 Transfusions. H. G. Sloan, Cleveland.

111. **Saline Solution in Surgery.**—Follansbee compares the results in 1,000 consecutive cases of cuts, lacerations and crushing injuries treated antiseptically by means of 1 to 2,000 bichlorid solution, and 1,000 consecutive cases of the same nature treated physiologically by normal saline solution. The instances of prolonged disability, of deformity and death due to infection in the series treated antiseptically were much in excess of those in the series treated physiologically. The number of secondary operations such as amputations and opening infections became noticeably less, although Follansbee has successfully attempted to save crushed fingers and toes that under the usual antiseptic treatment would have been lost. The number of cases which healed by primary union even in lacerations and crushes was markedly increased, although Follansbee's records are not sufficiently minute for him to venture on percentages. He finds it a most satisfactory dressing whenever it is desirable to promote healing in open wounds such as burns, ulcers, abscesses after wide incision, skingrafts, etc.

The manner of using is to keep the dressing saturated, preferably by dipping the injured part into a bowl of the solution. As the water evaporates from the dressing the salt is left, and if it is continually dipped and dried there is a great excess of salt which is liable to cause a dermatitis and to interrupt healing. To avoid this, it is only necessary to direct the patient to use pure water alternately with the solution. In the 1,000 cases of the bichlorid series there were 21 cases in which, on account of infection which developed, the period of disability suffered by the men was materially increased over what it should have been had no infection taken place, and in several cases deformity in the way of contractures or of loss of members resulted. There were also two cases of death following infection.

Ophthalmic Record, Chicago

March

113 Glioma Retinæ. E. Stieren, Pittsburg.
114 Osseous Tumor of the Orbit. H. F. Hansell, Philadelphia.
115 Toxic Amblyopia of Diabetic Origin Occurring in a Young Woman—A Rare Symptom of the Toxemia of Diabetes. W. Reber, Philadelphia.
116 Transplantation of Fat into Tenon's Capsule after Enucleation. A. N. Alling, New Haven, Conn.
117 A New Device for Suspending the Giant Magnet. S. J. Torney, Bellingham, Wash.
118 Orbital Fibroma: Unusual Clinical Manifestations. G. O. Ring, Philadelphia.
119 The Use of a Mass of Fatty Tissue as a Stump in Ocular Prothesis. A. E. Hershoff, Cleveland.
120 Psychoses Associated with Ocular Affections. S. D. Risley, Philadelphia.
121 Unusual Forms of Congenital Cataracts. W. C. Posey, Philadelphia.

Woman's Medical Journal, Cincinnati

March

122 Pregnancy as a Causal Factor in Enteroptosis. R. Moore, Rochester.
123 The Conservation of Manhood and Womanhood. E. W. Young, Boston.
124 Preventive Dentistry. A. S. Worthen, Boston.
125 The Importance of Vertigo in Symptomatology. M. L. Hurrell, Rochester.
126 Hygiene of Pregnancy. G. L. Broadhead, New York.
127 Postgraduate Medical Work for Women in Europe. M. S. Macy, New York.

American Journal of Physiology, Boston

April

128 Control Tests of a Respiration Calorimeter. F. G. Benedict, J. A. Riche and L. E. Emmes, Boston.
129 Comparison of the Direct and Indirect Determination of Oxygen Consumed by Man. F. G. Benedict.
130 The Mechanism of the Depressor Action of Dog's Urine: The Antagonistic Action of Adrenalin. R. M. Pearce and A. B. Eisenbrey, New York.
131 *The Internal Secretion of the Thyroid. A. J. Carlson and A. Woelfel, Chicago.
132 Physiology of Lymph—Methods of Inducing the Appearance of Polymorphonuclear Leucocytes in the Lymph. J. R. Green, Chicago.
133 Effect of Thyroidectomy on the Development of Active Immunity in Rabbits. C. A. Fjeldstad, Chicago.
134 Metabolism of Some Pyrimidin Derivatives. L. B. Mendel and V. C. Myers, New Haven, Conn.
135 *Physiology of Cell Division—Action of Isotonic Solutions of Neutral Salts on Unfertilized Eggs of Asterias and Arbacia. R. S. Lillie, Woods Hole, Mass.

136 *Metabolism of Development—Energy Metabolism in the Pregnant Dog. J. R. Murlin, New York.
137 Influence of Increase of Alveolar Tension of Oxygen on the Respiratory Rate and the Volume of Air Respired while Breathing a Confined Volume of Air. T. Hough, Charlottesville, Va.
138 Relation of Ptyalin Concentration to the Diet and to the Rate of Secretion of the Saliva. A. J. Carlson and A. L. Crittenden, Chicago.
139 Action of Extracts of the Anterior Lobe of the Pituitary Gland on the Blood-Pressure. W. W. Hambridge, Chicago.

131. **Internal Secretion of the Thyroid.**—Carlson and Woelfel investigated the nature of the thyroid lymph which they found did not differ materially from the neck or thoracic lymph. It did not contain iodin in appreciable quantities. Intravenous injection of thyroid lymph had no specific effects on the circulation. Complete elimination of thyroid and parathyroid lymph for from 36 to 48 hours in normal foxes does not induce the symptoms of thyroid-parathyroidectomy. While the feeding of thyroid preparations to mice poisoned with acetonitrile after the method of Hunt confirmed the results of Hunt that the poison was neutralized by the thyroid preparation, the thoracic lymph produced no such effect. Investigations of goitrous dogs showed that the iodin content of the thyroids is extremely variable. Iodin may not be present in detectable quantities in the thyroids of dogs which to all appearance are normal animals. Dogs with active thyroid hyperplasia according to histologic criteria, so far as found in the lake region, appear to be normal except the goiter, and exhibit none of the symptoms of exophthalmic goiter. Evidence is cited, showing: (1) that the thyroid may assume parathyroid structure and function and *vice versa*, and (2) that there is in all probability both a qualitative and quantitative difference in function of the thyroid and parathyroid under normal conditions. Evidence is also produced showing that both thyroid and parathyroid perform their functions with or without colloid or iodin in the glands; and that the present hypotheses concerning the relation of the colloid to the specific thyroid and parathyroid activities have little or no basis in fact. The colloid is peculiar in that it is an intercellular deposit. After remaining in the gland for a time it appears to be taken up by the same cells that secreted it and returned to the blood, but not to pass into the lymphatics. The authors favor the detoxication hypothesis of Cyon as explaining the fixation of iodin in the thyroid, that organ acting as a special filter to retain iodin which would otherwise be toxic to the organism. The iodin may be deposited in connection with or without colloid. The iodin absorbing power appears to be a function of the thyroid in a special degree and is not exhibited by the colloid of other organs.

135. **Physiology of Cell Division.**—Cell division as the first step in development is initiated by a number of agents such as sodium salts with various acids which Lillie finds are agents capable of increasing the permeability of the plasma membrane so that osmotic interchange occurs with a loss of some of the essential constituents of the cell. If this influence is carried too far there is an irreparable loss of material and death of the cell ensues. If the disintegrating influence be stopped at the right point the metabolic changes result in the initiation of the developmental process which may proceed as far as the blastula stage in the case of unfertilized *Arbacia* eggs. The permeability of the plasma membrane was shown by the escape of pigment. The salts of the same metal differ in their rate of action in the following order for sodium salts: sodium chlorid, sodium bromid, sodium nitrate, sodium sulphocyanate, sodium iodid. Potassium salts have a more gradual effect of the same kind and show the same general order of relative activity. The effect in initiating cell division is in the same order which is also the order of relative toxicity. A contrast is seen between the irreversible character of the death process which depends on increase of permeability and the reversibility of anesthesia in which activity ceases because normal permeability is decreased and in which the material of the cell is preserved and metabolic activity is resumed when the permeability becomes normal.

136. **Metabolism in Pregnancy.**—Murlin sums up the evidence to date regarding metabolism of the fetus as follows: 1. The energy metabolism of the embryo is greater per unit of weight than that of the mother. 2. This energy is derived in oviparous animals almost entirely from fat and in viviparous animals almost exclusively from carbohydrates.

From his own experiments on pregnant dogs he concludes as follows:

1. In a dog pregnant with only one embryo the increase in the total energy production due to pregnancy was not evident until the sixth week of gestation. Between the sixth and the eighth weeks an increase of 9 per cent. was observed.
2. The total energy production due to pregnancy, measured by the indirect method 3 days before parturition (in 2 different pregnancies in the same dog), proved to be proportional to the weight of the offspring at birth.
3. The extra energy production near the end of pregnancy is very nearly equal to the energy requirement of the new-born, when calculated according to Rubner's law of skin area.
4. The extra energy production of mother and offspring the first day after parturition is from 2 (5 puppies) to 3 (1 puppy) times the extra energy production of pregnancy 3 days before parturition.

Journal of Advanced Therapeutics, New York

March

140 The Rôle of Physical Therapeutics in the Treatment of Infection. W. B. Snow, New York.
141 Roentgenology for the General Practitioner: Its Limitations: Notes on Technic. D. R. Bowen, Rome, N. Y.
142 Controlling the Spark Gap of a Static Machine. G. S. White, Yonkers, N. Y.

Journal of Ophthalmology and Oto-Laryngology, Chicago

March

143 The Effect of the Electric Headlight on the Vision of Engineers. A. H. Andrews, Chicago.
144 The Sensory System of the Facial Nerve and its Symptomatology. J. R. Hunt, New York.

American Journal of Public Hygiene, Boston

February

145 An Epidemic of Probable Paratyphoid Fever. A. W. Freeman and H. T. Marshall, Charlottesville, Va.
146 Control of Typhoid in the City and Country: Description of a Modified Hesse's Medium for the Detection of Typhoid Bacillus in Excreta and Fluid Foods. W. R. Stokes and F. W. Hachtel, Baltimore.
147 *Management of Milk-Borne Outbreaks of Typhoid. C. V. Chapin, Providence, R. I.
148 Relation of Typhoid to the Water Supplies of Illinois. E. Bartow, Chicago.
149 Utility of the Domiciliary Visit in the Campaign against Yellow Fever. C. M. Garcia, Vera Cruz, Mexico.
150 *The Campaign against Yellow Fever on the Isthmus of Tehuantepec. F. Valenzuela, Mexico City.
151 *Yellow Fever in the Mexican Republic (Aug. 16, 1908, to date). E. Liceaga, Mexico City.
152 Limited Outbreak of Typhoid Due to a Double Water Supply. A. J. Douglas, Winnipeg, Canada.
153 Methods of Control of Communicable Disease by Boards of Health in Small Communities. F. G. Curtis, Newton, Mass.
154 Prevention of the Spread of Contagious Diseases, Particularly Among Children. A. S. Fell, Trenton, N. J.
155 The Tuberculin Test as Applied to a City's Milk Supply. G. W. Goler, Rochester, N. Y.
156 The Clean Milk Campaign in Hamilton, Ont. G. Steinmetz, Hamilton, Ont., Canada.
157 The Importance of Population Vital Statistics and their Treatment Actuarially. M. M. Dawson, Washington, D. C.
158 American Birth Registration. F. C. Gram, Buffalo.
159 The Budapest System of Death Classification. F. L. Hoffman, Newark, N. J.
160 Trade Mortality Statistics. F. L. Hoffman, Newark, N. J.
161 Smallpox in the United States. J. W. Trask, U. S. P. H. and M.-H. S.
162 Insanity in Immigrants. P. H. Bryce, Ottawa, Canada.
163 An Improved Bubbling Drinking Fountain. S. C. Keith, Boston.
164 Importance of Registration and Control of Cases of Laryngeal and Pulmonary Tuberculosis. D. D. Brough, Boston.
165 Ophthalmia Neonatorum: Facts Concerning the Disease and its Prevention as Affecting Massachusetts. M. W. Richardson, Boston.
166 Personal Hygiene. P. Stiles, Boston.
167 Veterinary Hygiene. W. L. Beebe, St. Paul.
168 Municipal Sanitation. C. V. Chapin, Providence, R. I.

147, 150. Abstracted in THE JOURNAL, Nov. 20, 1909, p. 1762.

151. Abstracted in THE JOURNAL, Nov. 27, 1909, p. 1844.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 2

1 *The Localization of Cerebral Function, based on the Clinico-pathologic Study of Mental Disease. J. S. Bolton.
2 Failure of Nerve Anastomosis in Infantile Paralysis. W. B. Warrington and R. W. Murray.
3 *An Anatomic Inquiry into the Pathway of Tuberculous Infection. F. W. Jones.
4 Rupture of the Tunica Vaginalis in Hydroceles. S. Hastings.
5 The Wassermann Reaction from a Practical Point of View. J. E. R. McDonagh.
6 *Tetanus Treated with Subcutaneous Injections of Magnesium Sulphate: Recovery. P. Paterson.

7 Hemorrhage Following Gastroenterostomy with Clamps. R. Ollerenshaw.
8 The Circulatory System (continued). H. Campbell.

1. **Localization of Cerebral Function.**—This is the first of the Goulstonian lectures. Bolton discusses the normal mode of evolution of the lamination of the cortex. He says that he purposes demonstrating that the essential physical basis of mental disease consists, on the one hand, in an imperfect development of the cell cortex, which is of the nature of a true sub-evolution or dissolution, since such decrease in depth takes place in the converse order to that in which the cell laminæ are developed during the process of normal growth.

3. **Pathway of Tuberculous Infection.**—Jones believes that his investigations point to the fact that with increasing age the abdominal lymphatics become more constricted, and the lymph circulation becomes more centered on the thoracic ducts. If some such process takes place, it would offer a ready explanation for the different sites of tuberculous infection in childhood and in adult life. If the mesenteric lymphatics most readily carry China ink (and tubercle bacilli) in children, the advent of tuberculous peritonitis is not difficult of explanation; and if the lymphatics of the diaphragm readily carry infection to the thorax in children, then basal phthisis is easily explained. Evidence of some such change would appear to be seen in the waning of lymphoid structures when the processes of growth have been carried out; for in the adult an atrophy of lymphoid tissues, and probably of the lymph channels, take place. At the period of life when bodily growth is complete it is not impossible that, with the atrophy of lymphatic structures the lymph stream becomes more dependent on the thoracic ducts, and this is the time of life when apical phthisis is most prone to occur. If the route of the thoracic duct should chance to be that by which the tubercle bacilli reach the lung in phthisis, and the spine in Pott's disease, it becomes a matter of importance to see if there is any symptom that might seem to point to an involvement of the duct. Of primary disease of the duct nothing seems to be known.

6. **Tetanus Treated with Magnesium Sulphate.**—Three weeks after he had received a small wound on the scalp from a kick, Paterson's patient developed tetanus. When brought under observation the whole body was rigid, with the exception of the forearms and hands. Opisthotonos was well marked; the legs could not be moved, and the incisor teeth could be separated for about an eighth of an inch only. All the affected muscles were very hard. He complained of severe and continuous pain across the upper part of the abdomen and down both legs. Superadded to the tonic contractions of the muscles there were almost continuous cramp-like spasms. Every two or three hours these became very severe, and implicated not only the muscles of the trunk and limbs, but also those of respiration, so that breathing was suspended, the face became cyanosed, the pupils dilated, the pulse thready, and occasionally consciousness was lost.

The following day the man received a subcutaneous injection of 10 c.c. of a 10 per cent. sterilized solution of magnesium sulphate, 5 c.c. being introduced into each thigh. Soon after this injection he obtained an hour's sleep, the first he had had for 48 hours. These injections were repeated every four hours, night and day, for 2 days. The comparatively slight and more frequent spasms had disappeared almost entirely, the pain had become much less acute and the severe spasms had become less frequent. As these were still so severe as to threaten life, however, the dose of the magnesium sulphate solution was rapidly increased till 20 c.c. were administered at one time, 10 c.c. being injected into 2 separate parts of the body at one time. This increased dose was repeated every 4 hours and continued for 4 days. The effect of this treatment seemed to be a prolongation of the interval between the spasms, there now being only one, or at most two, in the 24 hours. The rigidity of the jaws, abdomen and back was still present, but that of the legs was passing off, as he was able to draw them up in bed, though with difficulty. The injections were then stopped. The patient left the hospital 5 weeks after admission.

British Medical Journal, London

April 2

9 Four Cases in Which Stones were Removed from the Ureter. C. A. Morton.
10 Some Idiopathic Diseases of the Skin which may Simulate Syphilis. P. S. Abraham.
11 Rupture of the Bladder Followed by Gangrene of the Bladder Walls. P. C. Fenwick.
12 *Double Loop Hernia. J. A. C. Macewen.
13 *Gluteal Aneurism. W. B. Secretan.
14 Amputation for Diabetic Gangrene. A. E. Johnson.
15 Epilepsy. W. A. Turner.

12. **Double Loop Hernia.**—The case cited by Macewen was one of left femoral hernia and only one loop was strangulated. The probable period of strangulation in this case was a long one—not less than 5 days—from which, together with the condition of the bowel as found at the operation, it may be inferred that the strangulation was not complete, but was more of the nature of an obstruction of the lumen of the bowel than of marked interference with the blood supply of the affected loop. It is a question whether the loop became strangulated immediately on entering the sac or whether it had been present for some time previous, as the history of the sac, increasing markedly in size, seemed to suggest. As the loop was perfectly free in the sac, and there was not even a constricting band at the neck, Macewen is inclined to think that the loop had become strangulated immediately on its entrance into the sac 5 days previously.

13. **Gluteal Aneurisms.**—In Secretan's case a tense pulsating tumor was present in the right gluteal region. The pulsations were expansile, and a marked thrill could be detected at one point. Auscultation revealed a loud bruit. The center of the swelling was situated above and a little to the outer side of the point of junction of the middle and lower thirds of a line drawn from the posterior superior iliac spine to the ischium. The tumor extended down to the gluteal fold, which was almost obliterated, and, apparently, deeply into the pelvis. Owing to the severe pain and the possibility of rupture of the aneurism, Secretan tied the internal iliac artery. Four weeks later the aneurism could still be felt to pulsate, but not markedly. It was smaller than before the operation and felt rather hard.

Medical Press and Circular, London

March 23

16 Idiocy and Allied Conditions in Children. T. R. Whipham.
17 Acute Prostatic Abscess. V. Wall.
18 Flatulence and its Treatment. L. Boas.
19 Traumatic Neurosis Illustrating Successful Psychotherapy. T. A. Williams.

March 30

20 Idiocy and Allied Conditions in Children (continued). T. R. Whipham.
21 *The Physicotherapy of Sciatica. M. Orb.
22 *Administration of Ether by the Purely Open Method. R. H. Hodgson.
23 The Assimilation of Carbohydrates in Health and Disease. S. A. Arany.

21. **Physicotherapy of Sciatica.**—Orb favors the application of dry cupping glasses which the patients themselves can use, so that the application may be frequently repeated. He has seen good results in acute cases from wet packs on the hip and leg made with linen or silk bandages, wrung out in water of 60 to 70 degrees and covered with a double layer of flannel. Orb does not employ massage in the acute cases as the hard pressure often employed by masseurs may considerably increase the pains. But very light friction carefully applied by the physician himself, avoiding the most painful spots, is sometimes very useful.

Electrotherapy he does not apply very often; when he uses it he gives the galvanic current in acute and chronic cases, using 2 equal-sized electrodes, 10 square inches in area, the negative on the abdomen, the positive on the posterior iliac spine or the sciatic notch, moving both evenly along the leg without interruption of the current.

While the application of physical methods of treatment is limited in the acutest cases of sciatica, it has ample scope, he says, in the sub-acute and chronic cases. In these cases, massage is used most frequently. It is necessary to employ very light massage at the beginning of a course of treatment in order to avoid unnecessary and undesirable pains.

As improvement takes place, massage may be more energetic. Then *tapôtement*, intermittent pressure, and vibrations over the sciatic notch and the other painful spots are useful. Vibratory massage will very often be found successful. It is not advisable to give massage for longer than 15 minutes daily in sciatic cases. Once the pain is lessening, Orb recommends gymnastics, and exercises which induce a nonsurgical stretching of the sciatic nerve. Hydrotherapy is no less useful than other methods—the steam douche, the hot water spray, and the Scotch douche. Hot sitz baths are contraindicated, as the overflexing of the thigh during such a bath increases the pain.

22. **Administration of Ether by the Open Method.**—Hodgson depicts a new apparatus but unfortunately does not give a description of it. He claims that all the air breathed must first pass through drugs; no second breathing of the same air can take place. The quantity of ether necessary for a long operation is small—2 or 3 ounces. The patient feels but little sensation of suffocation. There is practically no struggling going under or coming to, and no fear of hemorrhage. The lungs and bronchial tubes are not choked by viscid mucus. The after-complications of ether administration do not arise. There are no sponges or other media liable to become foul or to accelerate freezing.

Journal of Tropical Medicine and Hygiene, London

March 15

24 Ascites with Enlargement of the Liver, Occurring in Nyasaland. R. Howard.
25 Symptoms and Treatment of Localized Bilharziosis of the Large Intestine. F. C. Madden.
26 Operative Treatment of Bilharziosis of the Large Intestine. O. Richards.
27 Campaign against Bubonic Plague in Ground Squirrels (*Citellus Beechey*) in California. W. C. Rucker.

Annals of Tropical Medicine and Parasitology, Liverpool

March

28 *Life History of *Trypanosoma Lewisi* in the Rat Louse (*Hæmatopinus Spinulosus*). A. Breinl and E. Hindle.
29 *Variation of the Hemolytic Complement in Experimental Trypanosomiasis. W. Yorke.
30 *Acute Craw-Craw. R. H. Kennan.
31 Prevalence of Mosquitoes in Cairo and its Environs. F. C. Willcocks.
32 Effect of Mosquito Larvæ on Drinking Water. R. Boyce and F. C. Lewis.

28. **Life History of Trypanosoma Lewisi.**—Breinl and Hindle have succeeded in transmitting *Trypanosoma lewisi* by means of *Hæmatopinus spinulosus*, and, with the aid of wet fixation methods, in modifying conclusions which have previously been drawn concerning the cytologic characters of this parasite in specimens stained by Romanowsky. In three of their experiments they have been able to transmit *Trypanosoma lewisi* by means of the rat louse. They usually collected well-fed lice from a heavily infected rat, and transferred them, after an interval of 20 hours, to a normal rat. In one experiment 24, and in the other 2 experiments, 40 lice were used. In the first 2 cases parasites appeared in the peripheral blood after an incubation period of 8 days, and in the third after 10 days. In each case the animal developed a typical infection. In two further experiments 10 lice were used after having been kept for two days in test tubes, but in neither did an infection result, although the animals were kept under observation for a considerable period.

29. **Variation of Hemolytic Complement in Experimental Trypanosomiasis.**—Results obtained by Yorke confirm those of Hartoch and Yakimoff, that in most cases of experimental trypanosomiasis, a marked diminution or total disappearance of the hemolytic complement can be observed for a few hours before the animal's death. This decrease of the hemolytic complement is limited to the last stages of the diseases, and is not met with in the earlier stages even when the blood is swarming with trypanosomes. The serum of an animal in the last stages of the disease at a time when it contains no hemolytic complement, has no inhibitory effect on the activating power of the complement of normal serum. The presence of numerous trypanosomes in the blood causes of itself no diminution of the hemolytic complement, and secondly it is not possible to absorb, *in vitro*, the complement from normal serum by the addition of numerous trypanosomes.

30. **Acute Craw-Craw.**—The term "craw-craw" is applied extensively in West Africa to describe pathologic conditions of the skin which are mainly characterized by the presence of a papulo-vesicular eruption, accompanied by more or less itching. Generally, this rash is most marked about the buttocks, perineum, genitals, and groins, and is most commonly seen in a condition which seems to indicate chronicity, *viz.*, scale formation, and hypertrophy. The rash is vesicular in the very early stage. The vesicles have very little, if any, papular foundation. Pricking the vesicle in the early stage allows exit of a sticky, pellucid fluid, and the vesicle can be entirely emptied by slight pressure without further rupture of its walls, leaving the latter collapsed. A day or so after the first outbreak of vesicles, fresh vesicles are formed between the older ones, and fresh spots continue to appear for a week or so. A few of the spots suppurate slightly, but definite adherent scabs are rare. A vesicle may show umbilication when a fine hair emerges from its center. The temperature is raised early and before any suppuration has appeared, and there is no "secondary" fever. Constitutional symptoms are definite but slight, and no more than would be expected to accompany the moderate degree of fever usually present (100 to 102 F.), and which lasts for a few days only. Itching is not generally a marked symptom, and is usually not present till the later stage; it is rarely intense, and it usually ceases before the rash has entirely disappeared.

Disappearance of the rash with desquamation of the epidermis of the affected parts is slow and protracted, and even with frequent bathing and friction the skin may still show signs of the rash for a month or six weeks, or even longer. No pitting or discoloration is found afterward. The mucous membranes are not usually affected. The progress of vaccination is not influenced by the disease.

Australian Medical Journal, Melbourne

February

33 Work of the Ballarat Division of the British Medical Association. R. Scott.
34 Treatment of Gastroenteritis. H. D. Stephens.
35 Muscular Function. W. Mackenzie.
36 Anuria Lasting Nine Days—Nephrotomy. H. G. Loughran.
37 Impressions of Surgical Work in Great Britain and America. D. M. Morton.

Annales de l'Institut Pasteur, Paris

February, XXIV, No. 2, pp. 81-160

38 Further Research on Infection from the *Trypanosoma campolense*. A. Laveran.
39 Serotherapy of Meningitis. (La sérotherapie antiméningococcique.) C. Dopter.
40 Experimental Diphtheria in the Chimpanzee. E. Burnet.
41 Spontaneous and Experimental Mouse Cancer. (Quelques recherches sur le cancer spontané et le cancer expérimental des souris.) L. Nègre.
42 Intracorpuscular Phases of Trypanosomes. (Stades endoglobulaires des trypanosomes.) A. Carini.
43 Parasites Resembling Bacilli Found in the Red Corpuscles of Brazilian Frog. (Sur quelques parasites semblables à des bacilles rencontrés dans les hématies du *Leptodactylus ocellatus*. A. Carini.
44 A Fungus Causing Spontaneous Tuberculoid Lesions in Brazilian Frog. (Sur une moisissure qui cause une maladie spontanée du *Leptodactylus pentadactylus*. A. Carini.

Annales des Mal. des Org. Génito-urinaires, Paris

March, XXVIII, No. 3, pp. 385-480

45 Paravaginal Pachyvaginalitis Following Trauma of Scrotum. G. Chavannaz and L. P. Nadal.

Annales de Mêdecine et Chirurgie Infantiles, Paris

March 15, XIV, No. 6, pp. 181-216

46 *The Daily Ration in Infant Feeding. (Quelques indications pratiques concernant la ration alimentaire du nourrisson.) Périer and Gaujoux.
47 Defective Development without Rachitis in Case of Tuberculosis. (Hypotrophie sans rachitisme dans un cas de tuberculose.) L. Tixier.
48 *Chronic Appendicitis. A. Schwartz.
49 Importance of Examination of Cerebrospinal Fluid in Diagnosis and Treatment of Meningitis. L. Bousquet and W. Mestrezat.

46. **The Daily Ration in Infant Feeding.**—Périer and Gaujoux give several tables for practical determination of the amount of milk best adapted for the individual child at each feeding and during the twenty-four hours; the child is weighed before and after each feeding and the average computed for the twenty-four hours. During the first 7 days the amount taken should increase on an average by 10 gm. (about one-third of an ounce) a day; during the first 5 months by an

average of 10 gm. a month, after which the increase is more gradual. Terrien's rule is to estimate the proper amount of milk by multiplying by 2 the first two figures of the child's weight in kilograms. Apert's rule is that the daily ration in grams should be exactly one-tenth of its weight in kilograms, plus 200 grams (A). The amount of each feeding should be one-fiftieth of its weight (B), and the number of feedings should be computed by dividing the first, A, by the second, B. Variot's rule is to compute the daily ration by multiplying by 15 the height of the child in centimeters (1 cm. equals 3/8 inch; 1 kilogram, 2 1/5 pounds).

48. **Chronic Appendicitis.**—Schwartz describes some of the forms that unsuspected chronic appendicitis may assume. In one case a boy of 12 had no appetite and for years had to be coaxed to eat even one or two rolls during the day. There were no symptoms and the mother applied to the physician merely on account of this chronic lack of appetite. Examination revealed some tenderness in the right iliac fossa and on the diagnosis of chronic appendicitis the appendix was removed. The boy developed appetite at once and conditions have since been normal. In another case a young man had recurring attacks of vomiting for several hours every two or three months but with no other symptoms, the digestion being apparently good. Nothing abnormal was found except that the large intestine was distended and thickened but nowhere tender. At last one of the attacks of vomiting was accompanied by signs of acute appendicitis and a small abscess was found in the appendix. Since its removal there has been no return of the attacks.

Bulletin de l'Académie de Médecine, Paris

March 1, LXXIV, No. 8, pp. 213-244

50 *Ectopia of the Heart. (Volumineuse hernie sus-ombilicale avec ectopie cardiaque.) M. Kirmisson.
51 Pathogenesis of Senile Cataract. H. Frenkel and A. Weiss.
52 *Proper Diet in Kidney Disease. G. Linossier and G. H. Lemoine.

March 22, No. 11, pp. 293-322

53 Graft of Muscle Tissue to Fill Cavity Left after Operative Treatment of Osteomyelitis in Clavicle or Tibia. Nélaton and E. Kirmisson.
54 Special Features of Arthritic Diathesis. Sir Dyce Duckworth and Chauffard.

50. **Displacement of the Heart Outside of the Thorax.**—Kirmisson reports a case in which a child was born with a large tumor just above the umbilicus, formed by a hernia, and another tumor also on the median line above which proved to be the displaced apex of the heart. The findings in this case are identical with those in a case reported by Vaquez and Foy in which the patient, a farmer, lived to be 37 years years old. In both cases the sternum was split into two parts and the apex of the heart presented in the cleft. Kirmisson was able to find only 2 other cases like these in the literature, but Lannelongue has a patient in good health to date on whom he operated 22 years ago, 14 days after birth. The apex of the heart in this case protruded through the cleft in the upper part of the sternum and through a gap in the skin. The ring of skin around the heart began to constrict that organ and consequently Lannelongue pushed the heart back into the thorax and covered the defect with large autoflaps from the vicinity. The child developed into a healthy woman and has borne three children, two of whom are alive and healthy. Auscultation does not reveal anything abnormal in the heart action, although the apex beat is in the space left by the fissure in the sternum. The absence of a pericardium does not seem to have hampered the heart in this case, no adhesions having developed to interfere with its functioning.

52. Abstracted in THE JOURNAL, April 9, page 1241.

Lyon Médical, Lyons

March 13, XL, No. 11, pp. 549-610

55 Acute Syphilitic Meningitis. L. M. Bonnet and N. Goujat.

March 20, No. 12, pp. 621-674

56 Intradermal and Cutaneous Syphilin Reaction in Syphilitics. J. Nicolas, M. Favre, C. Gautier and L. Charlet.
57 *Tuberculin Réaction in Syphilitics. J. Nicolas, M. Favre and L. Charlet.

57. **Reaction to Tuberculin in Syphilitics.**—Nicolas and Favre report a positive response to the tuberculin test in a number of syphilitics free from any suspicion of tuberculosis. They say that the history of various lesions in the skin and viscera will have to be revised as the assumption of a tuberculous origin based solely on the tuberculin reaction is thus shown to be unreliable and that the findings related explain the occasional cures sometimes reported of supposed tuberculous lesions under mercurial treatment.

Presse Médicale, Paris

March 19, XVIII, No. 23, pp. 193-200

58 Malta Fever. Gouget.

March 23, No. 24, pp. 201-208

59 The Rôle of General Pathology in Medical Instruction. C. Achard.

Revue de Médecine, Paris

March, XXX, No. 3, pp. 153-232

60 Myxedematous Infantilism with Mitral Stenosis and Sclerosis of the Thyroid in a Girl of 16. (Le nanisme mitral myxedemateux.) F. Klippel and E. Chabrol.
61 Epidemic Poliomyelitis. (La poliomyélite aigue.) E. Job and J. Froment.
62 Psychiatry in the Army. A. Haury.
63 *Analysis of Cerebral Fluid in Meningococcus Meningitis. (Analyse du liquide céphalorachidien dans la méningite cérébrospinale à méningocoques. Composition et formule chimique.) W. Mestrezat.
64 *Paradoxical Urinary Syndrome in Epidemic Cerebrospinal Meningitis. Galebert and C. Thubert.
65 *Two Cases of Cerebellar Syndrome from Hypertension of Cerebral Fluid. M. Lafforgue.

63. **The Cerebrospinal Fluid in Meningococcus Meningitis.**—From study of three cases Mestrezat has deduced a formula for the cerebrospinal fluid which applied constantly to his three patients and which seems able to differentiate this form of meningitis from the tuberculous. The proportions rose and fell parallel to the clinical course. The formula may be summarized as follows: 3 per thousand or over of albumin; 0.12 or 0.25 per thousand of sugar; between 6 and 7 per thousand chlorids; freezing point normal or below, and a permeability for nitrates ranging from 45 to 55 per thousand of sodium nitrate.

64. **Paradoxical Urinary Syndrome in Epidemic Meningitis.**—Galebert and Thubert state that contrary to conditions observed in other infections, the urine is clear and abundant with an exaggeration of the elimination of nitrogen and phosphates at the height of the disease. Serotherapy does not modify the formula except that the proportions are not so high. The subsidence of the temperature under the influence of the serum does not always mean that the disease is conquered; the proportion of nitrogen in the urine may remain high, showing that the disease still has the upper hand and that it is necessary to keep up the serum until the amount of urea in the urine begins to decline. Persistence of the azoturia indicates, the authors state, that the lower temperature under serotherapy is merely a deceptive lull in the storm, which is liable to break forth again with renewed fury. As soon as enough serum has been given, the azoturia subsides.

65. **Cerebellar Syndrome from Hypertension of Cerebrospinal Fluid.**—Lafforgue was able to cure permanently by repeated lumbar puncture the two patients presenting the cerebellar syndrome described. There was nothing to explain the evident hypertension of the cerebrospinal fluid except possibly alcoholism and recent mumps in one of the patients. There was no meningitis and no lasting derangement. The relief that followed lumbar puncture was striking in each case. In the first about 25 c.c. of apparently normal fluid was withdrawn at each of the 6 punctures at 3 or 4 day intervals. A few more punctures were made in the other case, some daily. Both patients were young soldiers. Scherb has related a somewhat similar case in which a cerebellar syndrome from uremic poisoning was cured by lumbar puncture.

Revue de Gynécologie, Paris

January, XIV, No. 1, pp. 1-96

66 Utilization of the Vagina for a Drain after Total Hysterectomy. (Drainage vaginal sans tube.) M. Chaput.
67 Myoma on the Rectum. F. Descoeudres.

February, No. 2, pp. 97-208

68 *Microcystic Degeneration of the Ovary. (L'ovaire à petits kystes.) E. Forgue and G. Massabuau.
69 *Ileocecal and Appendicular Tuberculosis. P. Alglave. Commenced in No. 1.

68. **Microcystic Ovary.**—Forgue and Massabuau report 23 cases with illustrations of the findings in the ovaries and dis-

cuss the nature and pathogenesis of the fundamental lesions and their importance in the pathology of the pelvis.

69. **Tuberculous Lesions in the Ileocecal Region and Appendix.**—Alglave studies the six forms that tuberculous lesions in this part of the intestine generally assume, with their history in the literature, and also autopsy findings in 52 cases from his own experience, with illustrations.

Semaine Médicale, Paris

March 30, XXX, No. 13, pp. 145-156

70 Autopsy Findings in Familial Hypertrophic Neuritis of the Pierre Marie Type. P. Boveri.

Berliner klinische Wochenschrift

March 14, XLVII, No. 11, pp. 469-516

71 *Tuberculous Articular Rheumatism. (Ueber tuberkulösen Gelenkrheumatismus.) E. Melchior.
72 Good Ultimate Outcome of Treatment of Congenital Talipes Equinovarus by the Pascale Method. (Postoperative Resultate bei Behandlung des angeborenen Pes equino varus nach dem Pascaleverfahren.) G. d'Agata.
73 *Diagnosis of Carcinoma of the Rectum. L. Kuttner.
74 Pathology and Treatment of Nervous Diarrhea. A. Bickel.
75 *Determination of Diastase in Urine and Stool as Test of Pancreas Functioning. O. J. Wynhausen.
76 Nature of Process of Production of Antitrypsin in the Organism. (Wesen der Antitrypsinsbildung im Organismus.) A. Braunstein.
77 Roentgen-Ray Examination in Anterior Mediastinitis. O. v. Dehn.
78 *Tuberculin in Diagnosis and Treatment of Pulmonary Tuberculosis. (Anwendung des Tuberkulins bei Lungentuberkulose.) E. Aufrecht. Commenced in No. 10.
79 Moving Pictures of Ultramicroscopic Findings. (Mikrokinematographische Aufnahmen bei Dunkelfeldbeleuchtung und Makrokinematographie.) K. Reicher.
80 The Privileged Communication. (Vom Rechte des Arztes zur Verweigerung des Zeugnisses und des Gutachten.) H. Lieske.

71. **Tuberculous Articular Rheumatism.**—Melchior reports a case of articular rheumatism in which the discovery of tubercle bacilli in the blood confirms, he asserts, Poncet's assumption of the tuberculous nature of many cases of rheumatism. When tuberculous pleurisy follows acute articular rheumatism, the tuberculosis may be secondary to the rheumatism, but there are a number of cases on record in which a pulmonary tuberculous process developed after an operation on rheumatic joints, or acute articular rheumatism followed an operation on a tuberculous joint or gland. These facts sustain the assumption that tuberculous articular rheumatism is merely a form of miliary tuberculosis restricted to certain regions, the joints. In his case a girl of 19 with a tuberculous glandular lesion in the neck in childhood and later in the jaw developed multiple acute articular lesions after an operation on the jaw. There was nothing to indicate gonorrhea or syphilis, and the joint lesions were more torpid than in ordinary acute rheumatism; the fever and pains were less intense. There was nothing to indicate pyemia; the discovery of tubercle bacilli in the blood cleared up the diagnosis.

73. **Early Diagnosis of Rectal Cancer.**—Kuttner reports a case in which a man of 51 complained of nausea and oppression, slight irregularity in bowel functioning, and rapid loss of 12 pounds in weight. Nothing abnormal was discovered in the abdomen or digestive functioning but traces of blood were found in the stool and examination with the finger revealed a minute linear projection in the rectum a few inches above the sphincter. The rectoscope disclosed a tendency to ulceration in the lesion and a scrap was excised for microscopic examination; signs of adenocarcinoma were found. The tumor was easily removed without interfering with the sphincter; it was only a little over half an inch in diameter, and the surgeon said it was the smallest rectal cancer he had ever encountered.

75. **Functional Testing of Pancreas.**—Wynhausen reports four additional cases to confirm his previous statements in regard to the reduction of the amount of diastase in the stool and the increase in the urine when the pancreas is not functioning properly. The average in health is about 500 diastase units, but with pancreas disease it drops to 10 or 30 units; in the urine the units are normally between 50 and 150, but with pancreatic disease they increase to 200 or 300.

78. **Tuberculin Treatment.**—Aufrecht reports satisfactory experiences with tuberculin treatment in minute dosage. He commences with 0.000025 gm. and increases by a fourth of this dose, never surpassing 0.0001 gm. supplementing it with all the usual other measures. A sanatorium course is advantageous for two or three months, he says, to insure hygienic conditions, but when the mode of life conforms to these already, the course of tuberculin can be carried out at home; after leaving the sanatorium it should be continued for months, the patient receiving an injection of 0.0001 gm. every week or two. He found the compound tincture of cinchona (of the German pharmacopeia), 2 teaspoonfuls in a little water before dinner and supper, extremely useful to keep the appetite good. If the cough disturbs sleep he gives 0.3 gm. Dover's powder at bedtime. If the cough is limited to daytime he prefers warm hot milk with seltzer water or an ipecac syrup mixture every two hours. When the cough is very obstinate, he keeps the patients in bed. Atropin is given to combat the night sweats, 0.0001 gm. in a pill at bedtime. Potassium bromid he found most effectual in treatment of insomnia. Drugs are not needed long as all these symptoms disappear, he asserts, under the tuberculin treatment; only iron is administered systematically with the tuberculin; it seems to aid in the local reaction induced by the tuberculin.

Deutsche medizinische Wochenschrift, Berlin

March 25, XXXVI, No. 12, pp. 545-592

81 *Postpartum Hemorrhage. (Wesen und Behandlung der Nachgeburtsblutungen.) W. Zangemeister.
82 Etiology of Epidemic Poliomyelitis. (Zur Aetiologie der Heine-Medinschen Krankheit.) H. Bonhoff.
83 Azure-Eosin Staining of Sections. (Färbung von Schnitten mittels Azur-Eosin.) G. Giemsa.
84 *Experimental Chronic Nephritis Entailing Higher Blood Pressure and Arteriosclerosis. (Erzeugung chronischer Nierenerkrankungen mit folgender Blutdrucksteigerung und Arteriosklerose.) E. Kautenberg.
85 Differential Diagnosis of Gastric Ulcer and Cancer by Hemolytic Test of Stomach Content. (Zur klinischen Differentialdiagnose des Carcinoma und Ulcus ventriculi mittels des Nachweises hämolytisch wirkender Substanzen im Mageninhalte nach Grafe und Röhmer.) E. Fabian.
86 *Relapsing Influenza. (Die Rückfallsgrippe.) W. Hellpach. Commenced in No. 11.
87 Cultivation of Cholera Germs on Blood Alkali Media. (Zum bakteriologischen Choleranachweise mittels der Blutalkali-Nährboden.) P. Esch.
88 *Abnormal Temperature Perception. (Ueber abnorme Temperaturempfindungen. Ein neues klinisches Symptom.) M. Sugar.
89 Direct Endoscopy of the Nasopharynx without a Mirror. (Epipharyngoscopia, Salpingoscopia et Rhinoscopia posterior directa.) A. v. Gyergyai.
90 Local Treatment of Iritis. E. H. Oppenheimer.
91 *Spasmophilic Tendency in Children over 12. (Ueber das Chvostecksche Symptom und den spasmophilen tetanoiden Zustand älterer Kinder.) O. Herbst.

81. **Treatment of Postpartum Hemorrhage.**—Zangemeister remarks that as the amount of blood is materially increased over normal during pregnancy, hemorrhage during delivery is of no moment unless considerably over a pint is lost. The average in 2,930 births in his service in two years was 170 c.c.; in 19 per cent. it was over 200 c.c., in 5.3 per cent. over 500. He insists that hemorrhage from supposed atony of the uterus is in nearly every instance traceable to retained clots. Even when there is a tendency to atony, the contractions still may be vigorous enough to induce complete retraction of the uterus if the uterus can be emptied of blood and kept empty for a few minutes. This can be accomplished by a single forcible expression of the uterus during contraction, which aids in expelling the retained clots, and then, by holding the uterus firm and pressing it down deep into the pelvis, the vessels are unable to bleed further and this gives the organ its chance to retract. He grasps the uterus firmly and by this means he has been able to arrest the hemorrhage in nearly every case. Ergot, he says, is of use only as it increases the force of the uterine contractions. When the hemorrhage is from a tear in the cervix fresh blood follows the child as it emerges, and the flow is independent of the contractions of the uterus, while bleeding from the site of the placenta does not manifest itself for several minutes after delivery and then some of the blood is dark red, with clots, and the gush coincides with the uterine contractions. By crossing the patient's extended legs and pressing them together, while the uterus is grasped, it is sometimes possible to arrest the hemorrhage from a tear. If the bleeding continues, there is probably some serious laceration of the cervix or of some branch of the uterine artery beyond the wall of the uterus, and suturing may be difficult or impossible. Momburg's belt constriction serves to gain time or may arrest the hemorrhage permanently.

The patient is removed to a table; the bed is too inconvenient. A wide speculum is inserted and under a good light the tubing around the waist is loosened and the site of the hemorrhage determined. If accessible, the bleeding vessels are clamped and the clamps left in place till next day. If the blood issues from a tear in the cervix, he expresses once more the contents of the uterus and while it is held firm from without he packs the tear, the uterus and the vagina with 5 inch strips of gauze, and if the hemorrhage is very profuse he sutures the vulva together over the whole for a few hours, introducing a permanent catheter into the bladder. These measures alone are not sufficient, as the bleeding may continue behind the tampon, but this is effectually prevented by applying a horseshoe dressing, made of cotton rolled into a hard roll in a towel, bent into the shape of a horseshoe and applied to the abdomen so that it encircles the uterus from above. This horseshoe is then bound down tight to the abdomen by broad abdominal bandages or towels, and the whole left undisturbed for twenty-four hours. He has applied these horseshoe bolsters for many years in all cases of severe hemorrhage from a tear in the cervix, and they have failed him in only one case in which he had neglected to suture the vulva. Of late he has been using an inflatable rubber bag for the horseshoe bolster, applying it uninflated and then inflating it after the abdomen has been bandaged tight, thus ensuring more effectual compression of the bleeding vessels.

84. **Experimental Chronic Nephritis with Consecutive Arteriosclerosis.**—Rautenberg reports that three weeks of retention of urine by ligation of the ureter in rabbits was invariably followed by development of chronic nephritis. After removal of the sound kidney, the animals survived for from 12 to 18 months with persisting albuminuria. Autopsy then invariably revealed extensive sclerosis and aneurism in the aorta, evidently the result of the inevitable increase in the blood pressure induced by the kidney changes. Even before the blood pressure rose, substances were discovered in the blood capable of dilating the pupil.

86. **Relapsing Influenza.**—Hellpach applies this term to the form of influenza in which the infection assumes a chronic, afebrile, relapsing character, the nervous system being predominantly affected. He describes a number of typical examples and discusses treatment and prophylaxis. The depression is generally out of all proportion to the severity of the symptoms, the patient finds mental work difficult and there is frequently a tendency to stumble over certain syllables—a difficulty in finding the right word. A tendency to dizziness is often observed, as also intolerance of alcohol, disturbances in the sexual sphere, motor weakness, sensory disturbances, muscular twitchings, and secretory, trophic and vasomotor phenomena, in addition to the typical neuralgiform pains in the feet and hands and elsewhere. Some of his patients suffered from a form of frontal neuralgia, which seemed to be a blending of supraorbital neuralgia and frontal sinusitis. The paroxysms of pain sometimes occur at regular hours of the day, but the pain is not quite so severe as in true neuralgia, and it may jump from side to side or elsewhere. Neuralgiform pains in the internal organs are also characteristic of relapsing influenza, especially a boring pain or ache in the heart after exertion, or with distention of the stomach or flatus. These symptoms may be observed singly or combined. A protracted prodromal condition persists for weeks before the patient has a typical catarrhal influenza. During this his other symptoms subside, but soon they return in kaleidoscopic sequence and combinations, and after a few weeks the individual has another catarrhal attack. This recurring cycle returns repeatedly, Hellpach asserts, for months, until finally the attacks gradually die out or an acute influenza may prove the last manifestation of the disease. Hellpach is convinced that many patients have been classed and treated as neurasthenics, rheumatics and chronic catarrh sufferers when in reality the whole trouble was this relapsing influenza. The obstinate objectivity of the phenomena seems to exclude pure neurasthenia, he says. It is significant that bacteriologic examination recently has revealed pyogenic germs in association with the specific influenza germ in many cases. This relapsing influenza includes certain phenomena which suggest septic trouble.

88. **Abnormal Temperature Sensation in Sclerosis.**—The touch of a test-tube filled with hot water and another filled with ice water were both perceived as heat in 25 cases of polyinsular sclerosis as the two test-tubes were applied simultaneously side by side to the skin. This abnormal temperature perception was not observed in a number of hysterical patients and healthy persons examined, nor in patients with myelitis. The von Strümpell test of temperature perception does not apply to the phenomenon described here.

91. **Chvostek's Sign in Older Children.**—Herbst examined 113 pairs of brothers and sisters and found the Chvostek sign most frequent among the older children. He also elicited the sign in 35 per cent. of 500 children, finding it most frequent at the age of 14.

Fortschritte der Medizin, Leipsic

February 24, XXVIII, No. 8, pp. 225-256

92 *Treatment of Disease in New-Born Infants. (Therapie der Erkrankungen der Neugeborenen. II.) P. Sittler. Concluded in No. 9.

93 *Abdominal Massage in Treatment of Whooping Cough and Catarrhal Processes in the Upper Air Passages. (Behandlung des Keuchhustens und anderer Luftröhrenkatarrhe durch die Bauchmassage.) E. Hönck. Commenced in No. 7.

March 3, No. 9, pp. 257-288

94 Changes in Walls of Arteries During or Preceding the Menopause, a Consequence of Disturbances in Internal Secretions. Schuster.

March 10, No. 10, pp. 289-320

95 Advantages of Having Tuberculous Mothers, Free from Open Lesions, Nurse their Babies. (Sollen tuberkulöse Mütter stillen?) Abramowski.

96 Staining Technic for Spirochetes. (Ueber Spirochätenfärbung.) Hennig.

March 17, No. 11, pp. 321-352

97 *Treatment of Inflammation in the Orbit by the General Practitioner. (Behandlung der Entzündungen der Augenhöhle.) A. Birch-Hirschfeld.

98 The Fundamental Errors of the Total Abstinence Zealots. (Grundirrtümer der Abstinenz.) W. Sternberg.

99 Treatment of Placenta Prævia. F. Fromme. Commenced in No. 10.

92. **Treatment of Disease in New-Born Infants.**—Sittler discusses melena, sepsis, jaundice, etc. Subcutaneous injection of gelatin in case of true melena should be supplemented, he says, by breast milk given cold by the teaspoonful, and stimulants for the heart and, in case of collapse, saline infusion with measures for warmth. In case of septic jaundice the treatment for sepsis should be applied, aiming first to keep the temperature normal and to ward off hypothermia. Special care should be taken to prevent regurgitation and aspiration of milk into the air passages with resulting bronchopneumonia. In case of idiopathic hemorrhage from the umbilicus it may be necessary to fill the depression with plaster mixed with alum. Peritoneal effusion is sometimes observed in new-born infants and great benefit may be derived from early tapping. Energetic surgical evacuation of the focus is sometimes required in osteomyelitis and may give good results. In case of tetanus he injects antitoxin subcutaneously or even into the nerve trunk in the infected wound, generally the umbilicus, or the injection may be subdural or intravenous with chloral and regular frequent feeding. Antistreptococcus serum may be useful in erysipelas, supplemented by local warm mild antiseptic applications. Prophylaxis of disease in the newborn, he declares, must not only be care for asepsis and suitable nourishment but must include oversight of the parents.

93. **Abdominal Massage for Whooping Cough and Other Respiratory Disturbances.**—Hönck's advocacy of abdominal massage was abstracted in THE JOURNAL, April 9, page 1242. He here describes the technic; it must never, he says, cause discomfort. He massages for about 10 minutes every day or second day, but he warns that as the benefits are great when skilfully done so the harm may be serious when done wrong. In his work in this line during several years, he has had only one mishap; in this the massage evidently caused the flaring up of a latent appendicitis. For this reason he now always takes the temperature to exclude latent abdominal disease before massaging. He does not restrict the massage to the nerve tracts.

97. **Treatment of Inflammation in the Orbit.**—Birch-Hirschfeld discusses this subject from the standpoint of the general practitioner, especially when ophthalmologic treatment is im-

possible. If there is no subsidence of the orbital symptoms after a few weeks of general treatment—potassium iodid, mercury, tuberculin or arsenic, according to the presumed etiology—operative treatment should no longer be deferred. In a large proportion of cases the inflammation in the orbit is secondary to a sinusitis. Chronic mild sinusitis without actual suppuration may involve the orbit and induce scotoma or exophthalmos. By endonasal treatment of the sinus, the orbital process may heal with it. The general practitioner may be forced to operate for an acute phlegmon in the orbit such as may develop after trauma or secondary to a sinusitis. If improvement is not evident after a few days the danger of brain complications may require the evacuation of the entire contents of the orbit. If the trouble is merely a subperiosteal abscess in the orbit it may heal if the focus is exposed and emptied, sparing the tissues in the orbit. The underlying sinusitis can then be given proper treatment by a specialist. Treatment of the sinusitis alone may cure the orbital trouble with retrogression of the protrusion and dislocation of the eyeball, chemosis, and tenderness without necessity for direct measures on the orbit. He advises, therefore, directing attention first to the treatment of the sinusitis unless the symptoms are too threatening. He adds that not less than 409 of the 684 cases of orbital inflammation he has found in the literature were traceable to sinusitis. Thus, in 59.8 per cent. of the cases the trouble originates in the sinus; in not less than 118 cases vision was lost and in 99 the case terminated fatally. Much harm can be averted by the general practitioner's appreciation of the complications to be feared. The measures to be advised must be based on thorough examination of the nose and general condition. At present it too often happens that he contents himself with compresses and a purgative, and does not consult with the ophthalmologist, the rhinologist or the surgeon until serious complications develop and the moment for successful relief is past.

Medizinische Klinik, Berlin

March 20, VI, No. 12, pp. 452-492

100 *Principles of Dietetics in Digestive Disturbances. (Grundlagen der Diätetik bei Verdauungskrankheiten.) A. Bickel.
101 *Pathology and Treatment of Acute Pancreatitis. D. Pupovac
102 Connection between Inhalation of Smoke and Croupous Pneumonia. (Zusammenhang von Raucheinatmung und kruppöser Pneumonie.) H. Grau.
103 Tincture of Iodin in Surgical Sterilization. (Wert der Joddesinfektion, geprüft an einem grossen Hernienmaterial.) E. W. Baum.
104 Epidural Injections plus Cocainization of the Nasal Mucosa to Relieve Labor Pains. (Ueber sakrale Anästhesie in Verbindung mit Kokainisierung der Nase zur Linderung der Geburtsschmerzen.) K. Mayer.
105 *Fate of Existing Pregnancy after Bilateral Oöphorectomy. (Schicksal der Schwangerschaft nach Entfernung beider Eierstocke während der Schwangerschaft.) L. Löwenstein. Commenced in No. 11.
106 Gout and the Kissingen Waters. (Ueber die Gicht und die Kissinger Trinkkur.) E. v. Sohlern.
107 Filterable Virus and Nature of Epidemic Poliomyelitis. (Ueber filtrierbares Virus und über das Wesen der Poliomyelitis acuta.) R. Kraus.

100. **Dietetics in Treatment of Digestive Disturbances.**—Bickel discusses what is meant by a light digestible diet. Does this mean foods easily attacked by the ferments, or easily passed along out of the stomach, or not inducing much secretion of digestive juices, or does it mean easily absorbed? The individual conditions in each case require that the diet should conform to the special manifestation of incompetency, and much more research is needed in this line. The effect on the motor and secretory functioning depends on the physical structure and chemical composition of the food. The more finely divided the food the less the demands on the motor functioning, and also the less the stimulus for secretion. Low temperatures seem to stimulate motor functioning; the more concentrated the solution the greater the stimulus to secretion. The chemical composition of the food is also important from this point of view; human milk leaves the stomach quicker than cow's milk, even in the same dilution. He lists as articles that have little, if any, effect in stimulating gastric secretion: water, alkaline mineral waters, tea, cocoa, cream, egg albumin, other pure native albuminoids in aqueous solutions; also 0.9 per cent. salt solution. Of solid foods he mentions boiled meat, fats of all kinds, boiled vegetables, starch and sugar; the vegetables should be taken in the form of a purée, that is, mashed soft. The list includes further white meat and fish as finely divided as possible. On the other hand, secretion is stimulated by all the alcoholic and carbonated drinks; by coffee, skimmed milk, meat broths and extracts, egg yolks, condiments and salt, except the 0.9 per cent. solution, and all raw, roasted or briefly boiled meat, salted and smoked meats, bread and all albumin and starch articles of food made in the bread form, and all vegetables not long boiled. This classification, he says, has rendered him inestimable service for many years in treatment of gastric trouble with secretory disturbances. Many of the foods make parallel demands on the motor and secretory functioning, or spare both alike.

101. **Treatment of Acute Pancreatitis.**—Pupovac describes the clinical picture of acute pancreatitis and the necessity for early diagnosis and operation, with every effort to protect the vicinity from the action of the pancreatic juice by appropriate tamponing. He regards the Bunge technic as preferable, done under primary or local anesthesia, with or without cecostomy.

105. **Fate of Existing Pregnancy After Oöphorectomy.**—Löwenstein concludes from his experience and the cases on record that the gravid uterus can tolerate bilateral ovariotomy without interference with the pregnancy. In his own case the operation was done on the forty-fourth day of the pregnancy and the patient was able to nurse her child for sixteen months after normal delivery. One ovary was removed during one pregnancy and the other during a later pregnancy, a dermoid cyst being removed at the first operation and the enlarged left ovary in cystic degeneration at the other. Essen-Möller removed the ovaries soon after conception without interference with the pregnancy, thus showing, he asserts, that the corpus luteum has not the importance for the pregnancy which Fraenkel maintains.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXI, No. 3, pp. 377-555. Last indexed March 19, p. 1015

108 Viscosity of Human Blood with Special Reference to Surgical Lesions. (Viskosität des menschlichen Blutes mit Besonderer Berücksichtigung ihres Verhaltens bei chirurgischen Krankheiten.) W. Müller.
109 Importance of Certain Anaërobes in Pathology, especially Puerperal Disease. H. Schottmüller.
110 *Mobilization versus Immobilization of the Lung in Treatment of Tuberculosis. P. Harrass.
111 Ossifying Myositis and Allied Ossifying Processes, especially with Organic Nervous Disease. (Myopathologische Beiträge.) H. Steinert.
112 Origin of Brachydactylia. E. Ebstein.
113 Mechanism of Invagination of the Intestine. (Mechanismus der Darminvagination.) C. Propping.

110. **Therapeutic Mobilization Versus Immobilization of the Lung.**—Harrass refers to the method of immobilizing the lung by means of artificially induced pneumothorax or a thoracoplastic operation according to Brauer's or Friedrich's technic, and to Freund's method of releasing the lung by severing the rigid first costal cartilage, or chondrotomy, as he calls it. Both of these methods have been evolved by empiric observation of Nature's processes. The former has a promising outlook in cases of severe advanced tuberculous lesions in one lung, while the chondrotomy is only for a small group of well-defined afebrile, incipient cases. Both, he says, seem to promise well; chondrotomy has given good results to date in the seven cases in which it has been applied, and the nitrogen injections have been followed by development of connective tissue in the compressed lung.

Monatsschrift für Kinderheilkunde, Leipsic

February, VIII, No. 11, pp. 657-728

114 Intestinal Bacteria and the Food. (Darmbakterien und Ernährung.) Otaki and H. Vogt.
115 Importance of Weighing Young Infants every Four Hours to Judge of their Condition. (Wert vierstündlicher Wägungen für die Beurteilung des Zustandes junger Säuglinge.) E. Schloss.

Münchener medizinische Wochenschrift

March 15, LVII, No. 11, pp. 561-616

116 Inhibition of Wassermann Reaction by Mercuric Chlorid. (Ueber die Hemmung der Wassermannschen Reaktion durch Sublimat und über die Möglichkeit dieselbe aufzuheben.) G. Satta and A. Donati.
117 Effectual Serotherapy of Epidemic Poliomyelitis. (Spezifisch wirksames Serum gegen das Virus der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
118 Bacteriologic and Histologic Research in Congenital Syphilis. J. Trinchese.

119 Progress in Intubation Treatment of Diphtheritic Stenosis of the Larynx. K. Kaspar.
120 Endoscopy of the Nasopharynx and Larynx. (Zur endoskopischen Untersuchung des Nasenrachenraumes und des Kehlkopfes.) K. Schmuckert.
121 Aseptic Catheterization. (Der aseptische Katheterismus und Selbstkatheterismus.) Grosse.
122 New Drugs and Therapeutic Efforts. H. Hildebrandt.
123 Danger of Excessive Action of Ergot. (Unerwünschte Ergotinwirkung.) L. Klapp.
124 Case of Typhoid plus Paratyphoid Infection after Eating Oysters. F. Popp.
125 Two Cases of Cervical Cesarean Section. E. Rosenfeld.
126 Formula for Calculating Amounts in Infant Feeding. (Einfache Formel zur Berechnung der Nahrungsmenge für Säuglinge.) G. Heimann.
127 The Medical Papyrus in the Berlin Museum. G. A. Watzold.

Therapeutische Monatshefte, Berlin

March, XXIV, No. 3, pp. 113-168

128 *Injurious Action of Coffee and Tea in Tendency to Gout. (Zur Frage der harnsäurevermehrenden Wirkung von Kaffee und Tee und ihrer Bedeutung in der Gichttherapie.) A. Schittenhelm.
129 *The Purin Content of Food. (Zur Diätetik bei harnsaurer Diathese und Gicht: der Puringehalt der Nahrungsmittel.) G. Bessau and J. Schmid.
130 Action of Strophanthin on Artificially Lowered Blood Pressure. (Versuche über die Wirkung medizinaler Strophanthingaben auf künstlich erniedrigten Blutdruck.) H. Straub.
131 Treatment of Acute Catarrhal Otitis Media. (Die akute Mittelohrkatarrh und seine Behandlung.) H. Klau.
132 *Technic for Operations without Necessity for Personal Assistance. (Zur Technic chirurgischer Operationen unter absoluter Emanzipation von persönlicher Assistenz.) L. Meyer.

128. **Coffee and Tea as Producers of Uric Acid.**—Schittenhelm's research on dogs seems to confirm, he says, the experiences recently related by Besser and by Axisa, who found that ingestion of tea and coffee in man had a pronounced effect in increasing the tendency to uricacidemia.

129. **Purin Content of Various Articles of Food.**—Bessau and Schmid have conducted research to determine the proportion of purin bodies in various articles of food, striving to make out a table with more rigorous determination of proportions and with uniform technic, in comparison to the tables of Walker Hall, Burian and others generally cited in the text-books. The proportions thus determined are listed in detail. They vary somewhat from those hitherto accepted in that an unexpectedly large proportion of purin nitrogen was found in the smaller fish, in sardines, in spinach, in green peas and dried peas and in beans. Mushrooms, pigeons, thymus, liver and kidneys also show a large proportion, but the difference is less than expected between the various kinds of meat.

132. **Operations Without Assistance.**—Meyer gives an illustrated description of various devices that enable the services of an assistant during operations to be dispensed with, even in the home. He warns against attempting outside of a hospital any operation in which a joint has to be opened, a plastic operation or removal of very large tumors. The surgeon should be equipped and able, he says, to do other operations in the home without assistance. The necessity for emergency operations is daily increasing. The tincture of iodin method of preparing the field of operation he considers a great advantage if experience confirms what is claimed for it. The main point in the assistantless operation, he remarks, is to plan it all out beforehand and be prepared for every phase as it arrives, the instruments arranged in turn on tables and chairs so that the operator can pick them up without glancing away from the field of operation. For operations on the vagina or rectum the sloping "desk" devised by Albarran for operations on the prostate is very convenient. Another useful device is the Auvard speculum, an aluminium tube with a row of small holes in one side. The vaginal portion of the uterus is seized with a curving forceps, a small hook in the side of the forceps hooking into one of the holes in the side of the speculum and thus enabling the cervix to be drawn down and held automatically at the point desired.

Wiener klinische Wochenschrift, Vienna

March 24, XXIII, No. 12, pp. 425-458

133 Research on Anaphylaxis with Carcinoma in Man. (Anaphylaktische Untersuchungen beim Karzinom des Menschen.) G. E. Kelling.
134 *Arrest of Production of Effusions, etc., by Administration of Calcium Salts. (Hemmung von Transsudat- und Exsudatbildung durch Kalziumsalze.) R. Chiari and H. Januschke.
135 Posthemiplegic Chorea. (Zur Kasuistik und zur Erklärung der posthemiplegischen Chorea.) K. v. Economo.
136 Partial Suprapubic Prostatectomy. A. Nogueira.
137 Control of City Milk Supply. (Die gesetzliche und freiwillige Kindermilchkontrolle.) S. Weiss.
138 Radiosusceptibility. (Zur genaueren Kenntnis der Radiosensibilität.) R. Kienböck and G. Schwarz.

134. **Effect of Calcium Salts in Preventing Production of Effusions.**—Chiari and Januschke report experimental research which showed that the subcutaneous injection of calcium salts was able to prevent the formation of pleural effusion in poisoning with sodium iodid, thiosinamin and diphtheria toxin in dogs and guinea-pigs. It also prevented the development of inflammatory edema in the rabbit conjunctiva after instillation of oil of mustard. It seems evident that the calcium not only renders the blood less fluid but seems to make the vessel walls less permeable. Wright has also reported similar results in urticaria after serotherapy. It may be possible by this means, they believe, to influence the development of effusions in the clinic.

Zeitschrift für klinische Medizin, Berlin

LXX, Nos. 1-2, pp. 1-183. Last indexed March 5, p. 828

139 Consequences of Severing the Tawara Leg of the Stimulus-Conducting System in the Heart. (Folgen der Durchschneidung der Tawaraschen Schenkel des Reizleitungssystems.) Eppinger and J. Rothberger.
140 *Resorption Fever and Early Recurrence in Infectious Diseases. (Resorptionsfieber und Frührezidiv bei Infektionskrankheiten.) A. Menzer.
141 Palpation of the Appendix. (Zur Untersuchung des Wurmfortsatzes.) W. Orlowski.
142 Influence of Respiration on Blood Pressure and Size of Heart. (Beobachtungen über den Einfluss der Respiration auf Blutdruck und Herzgrösse.) F. M. Groedel.
143 Progress in Percussion of the Lung Apex. (Ueber die Goldscheidersche Lungenspitzen-Perkussion.) H. Cornet.
144 The Coronary Vessels and their Influence on the Dilatation of the Heart Cavities. (Die Koronargefässe und ihr Einfluss auf die Dilatation der Herzhöhlen in Diastole.) G. van Eysselsteyn.
145 Antiformin Technic for Bacteriologic Examination of Tuberculous Sputum. (Nachweis der Tuberkelbazillen im Sputum mittels der Antiforminmethode.) H. Goerres.
146 Experimental Research on Influence of Body Temperature on the Diastase. (Einfluss der Körpertemperatur auf die Diastase.) H. Schirokauer.
147 *Pathology and Treatment of Fibrinous Pneumonia. H. v. Wyss.

140. **Fever from Absorption and Early Relapse in Infectious Disease.**—Menzer analyzes 11 cases of typhoid, tonsillitis or other acute infectious diseases presenting a flaring up of the fever after apparently complete defervescence. His study of the cases shows that the fever is the result of absorption of toxic products from the infectious foci and that this is also the cause of the return of symptoms. He has observed this absorption fever most frequently in the course of tonsillitis and influenza, and is in the habit of warning his patients of the liability of a recurrence. He is careful to give no antipyretics as the convalescence without them seems to be much more rapid than when the fever has been prematurely reduced by their influence. The fever curve in measles shows two phases; the after-fever frequently is higher than in the first stage. This assumption of an "absorption fever" seems to explain, he says, the peculiar course of many infectious processes.

147. **Salt in Treatment of Fibrinous Pneumonia.**—Wyss gives a detailed report of the clinical course in 50 cases of this disease at the medical clinic at Zürich in charge of Eichhorst. The aim in treatment should be: (1) to prevent any demands from outside on the heart; (2) to prevent any increase in the resistance in the interior of the organism; and (3) to sustain the action of the heart by appropriate drugs. Rest is therefore the main thing, not only keeping the patients in bed but combating the delirium and the resulting motor restlessness. No time should be wasted with weak narcotics, he declares, but morphin should be given at once to insure quiet and rest. The second indication he meets by measures to promote the circulation, especially to restore fluids to the body and render the blood less concentrated. His experience has shown that the fluids can be kept in the proper proportions by intake of salt. He found that 10 gm. (150 grains) of salt was sufficient to restore the proper balance of the fluids in the body. He gave the salt in thin broths into which an egg was stirred, or in milk. He reiterates that a regular and copious rinsing through of the body with water is beneficial, and that nothing accomplishes it so satisfactorily as this intake of salt in small regular amounts given by the mouth. Given by the

rectum there is liable to be irritation and in saline infusion the sudden flushing of the body with water may be directly dangerous. The heart does not become insufficient when the body has sufficient fluids. He does not compel the patients to drink, but after the salt is taken they are thirsty and call frequently for water. The diet is restricted to fluid food given every hour during the fever, the patient being awakened when necessary. The individual does not lose weight so rapidly and recovers more quickly when this is done systematically. The blood count is a faithful picture of the blood-making capacity of the bone marrow, and thus permits important conclusions as to the prognosis. A small number of leucocytes is only relatively significant. The retention of chlorids is not the expression of a specific feature of the disease but is dependent on the water metabolism. The delirium in fibrinous pneumonia may be due, Wyss says, to intoxication or to the influence of alcohol, or it may be a sign of collapse; in each it has a different significance and requires different treatment.

Zentralblatt für Chirurgie, Leipsic

March 26, XXXVII, No. 13, pp. 465-496

148 *Traumatic Rupture of the Appendix. (Ueber traumatische Appendicitis.) Pohl.

148. **Traumatic Appendicitis.**—Pohl reports a case which confirms the possibility of appendicitis of traumatic origin, not only directly following the trauma but even long after slight trauma. His patient was a man who had been hit by the crank of a gas motor which he was repairing. Severe symptoms at once developed suggesting appendicitis, and prompt operation showed that the blow had evidently forced the contents of the appendix or cecum into the tip of the appendix with such force that the mucosa had become eroded with secondary inflammation. Inflammation might develop in the same way even after a slight trauma affecting the region.

Zentralblatt für Gynäkologie, Leipsic

March 26, XXXIV, No. 13, pp. 433-464

149 Sacral Anesthesia in Obstetric Cases by Epidural Injections. (Weitere Versuche über die sakrale Anästhesie.) A. Rieländer.

150 *Treatment of Placenta Prævia. J. Olow.

150. **Treatment of Placenta Prævia.**—Olow reviews the experiences at Lund with 41 cases of placenta prævia in the last ten years. The preference was given to version over the hystereurynter as offering better chances for the mother on account of the danger of infection with the inflatable bag. The maternal mortality was 2.42 per cent., that of the children 40.9 per cent.

Zentralblatt für innere Medizin, Leipsic

March 26, XXXI, No. 13, pp. 322-344

151 Catarrhal Enteritis in Etiology of Transient Glycosuria. (Zur Aetiologie transitorischer Glykosurien.) H. L. Richartz.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 13, XXXI, No. 31, pp. 321-336

152 Aphasia. F. Schupfer.

153 Necessity for Operative Treatment of Traumatic Dislocation of the Elbow with Fracture of the Inner Condyle of the Humerus. (Intervento operativo per lussazione traumatica del gomito con frattura dell' epitroclea.) L. Vercelli.

March 15, No. 32, pp. 337-344

154 *Typhoid Cortical Reaction in Children. (Considerazioni cliniche sulle infezioni generali nei bambini.) C. Amistani.

March 17, No. 33, pp. 345-352

155 *Differentiation by Millon's Reagent of Tuberculous from other Pus and Effusions. (Intorno alla reazione Millon per gli escreati e gli essudati purulenti.) A. Golinelli.

March 22, No. 35, pp. 369-376

156 *Treatment of Pleurisy by Artificially Induced Oxygen Pneumothorax. (Sulla cura delle pleuriti.) C. Molon.

154. **Typhoid Cortical Syndrome in Young Children.**—Amistani noticed a peculiar meningeal syndrome during the third week of typhoid in young children during a recent epidemic in his district. The diagnosis wavered between uremia, true meningitis, and a tuberculous meningitic process, but by exclusion he explains it as a toxic action of the typhoid infection on the brain cortex. The cerebrospinal fluid was limpid. On this assumption treatment was directed to soothing the nervous system by giving bromids or chloral and avoiding nerve stimulants such as alcohol or strychnin and the meningeal symptoms soon subsided. The children also displayed an unusual tendency to hemorrhage, not only cutaneous but in the internal organs.

155. **Differentiation of Tuberculous from Other Pus and Sputum.**—Golinelli has been testing on an extensive scale the method of differentiation of tuberculous pus devised by Müller and described in THE JOURNAL, June 15, 1907, page 2081. Golinelli's findings do not confirm absolutely the specific nature of the test; a positive response was sometimes obtained with pus of other origin, but a negative response seems to exclude tuberculosis beyond question. The test does not seem to have any value in respect to differentiation of tuberculous sputum, as a negative response was occasionally obtained with sputum containing tubercle bacilli.

156. **Artificially Induced Oxygen Pneumothorax in Treatment of Pleurisy.**—Molon has been applying this measure systematically in cases of pleurisy with effusion, injecting the oxygen or air as the effusion was removed by tapping. Benefit was prompt and permanent, the pain and dyspnea subsiding at once. He found that filtering the gas through cotton did not keep out all germs, and he improved on this method by passing the gas through a Chamberland candle, with a contrivance to regulate the pressure and measure the amount used. He generally injected about the same amount as of the fluid withdrawn, allowing the gas to enter very slowly through an opening above the one made for the escape of the fluid, the patient sitting upright. By this means even large effusions can be drained away without causing any disturbances from the change in the pressure inside the chest. He suggests that this method of immobilizing the lung might prove useful in aborting pleurisy by giving the pleura a chance to rest while putting an end to the pain from traction on the pleura. He has thus treated six patients with secondary pleurisy without effusion, as a prophylactic measure; all symptoms disappeared after the injection of about 400 c.c. of oxygen. The symptoms returned in one patient but yielded again to another injection. He does not venture to decide whether the effect is merely mechanical or whether the oxygen may not have a direct healing influence on the process.

Policlinico, Rome

March, Medical Section, No. 3, pp. 97-144

157 Retention of Nitrogen—Azotemia. P. Rondoni.

158 Modification in the Structure of the Arteries in Chronic Nephritis. F. Fulci.

159 Successful Relief of Parathyreopriva Tetany by Subcutaneous Injection of Magnesium Salts. (Contributo al trattamento della tetania paratireopriva mediante ipodermoclisi con sali di magnesio.) C. Canestro.

160 Mixed Infection with Experimental Malta Fever. (Infezioni miste con il bacillo melitense.) A. Cantani.

March, Surgical Section, No. 3, pp. 97-144

161 Cancer in Accessory Thyroid. (Contributo alla conoscenza dei tumori maligni delle glandole tiroidee accessorie.) V. Barnabo.

162 Ligature of the Hepatic Artery. (La legatura dell'arteria epatica e dei suoi rami.) V. Nicolleti.

163 Sarcoma of the Pylorus with Tuberculous Adenitis. (Sarcoma del piloro con adenite tubercolare.) G. Pieri.

Riforma Medica, Naples

March 14, XXVI, No. 11, pp. 281-308

164 *Experimental Research on Effect of Quinin on the Properties of the Serum. (Di una pretesa possibile proprieta immunizzante della chinina.) L. Ferrannini.

165 *General Anesthesia with Part of the Circulation Shut Off. (Note ed osservazioni sulla narcosi con circolazione artificialmente ridotta.) M. Donati.

166 Splenomegaly with Cirrhosis of the Liver. A. Germani.

164. **Effect of Quinin on Properties of Serum.**—Ferrannini was unable to discover anything in his research on dogs which suggested that the blood serum acquired any bactericidal, agglutinating or immunizing properties under continued administration of quinin. Neither the phagocytic power nor the opsonic index of the blood serum seemed to be modified.

165. **General Anesthesia with Part of Circulation Shut Off.**—Donati in 71 cases applied Klapp's method of artificially shutting off the circulation in the limbs as an aid in general chloroform anesthesia. Thrombophlebitis developed in 3 cases while he witnessed nothing of the kind in his cases under ordinary technic. This experience, he says, confirms

that recently reported by Gräfenberg in which thrombosis developed in 6 out of 75 cases under this technic, but only once in a series of 75 cases with ordinary technic. In no instance was there a pre-existing tendency to varices on the legs which might have explained the thrombosis. With part of the circulation shut off the tendency to vomiting seemed to be materially reduced, but this advantage was counterbalanced by the sense of weight and tingling in the legs in the first few days after the operation. In the 3 cases in which thrombophlebitis developed the constriction had been applied for from 60 to 72 minutes; the operations were for hernia or ankylosis of the knee. On the whole he feels constrained to warn against the Klapp technic.

Ugeskrift for Læger, Copenhagen

March 3, LXXII, No. 9, pp. 235-268

167 *Lubricating Catheters by Boiling the Vaselin in the Water with the Catheter. (Et ny Metode til steril Inungering af Kathetre og Bougier.) C. Engelbreth.

March 10, No. 10, pp. 269-304

168 *Treatment of Pulmonary Tuberculosis by Artificially Induced Pneumothorax. (Pneumothoraxbehandling og almindelig Praxis.) C. Saugman.

March 17, No. 11, pp. 305-340

169 *History of Sporotrichosis. C. E. Jensen and A Kiørboe.

March 24, No. 12, pp. 341-368

170 Technic of Tonsillectomy. N. R. Blegvad.

167. **Sterile Lubrication of Catheters.**—Engelbreth boils the vaselin with the catheter in the water. This not only ensures that the lubricant is sterile, but as the catheter is lifted out of the water it takes on automatically a thin, even coating of the vaselin or oil floating on the surface.

168. Abstracted in THE JOURNAL, April 23, page 1414.

169. **Sporotrichosis.**—Jensen mentions that the sporothrix was found in certain human lesions by American investigators several years before de Beurmann's publications on the subject, but he adds that the cultural characteristics speak against the identity of the sporothrix found in France and in America.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

MODERN MEDICINE. Its Theory and Practice in Original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, assisted by Thomas McCrae, M.D., Associate Professor of Medicine and Clinical Therapeutics in the Johns Hopkins University, Baltimore. Vol. VII, Diseases of the Nervous System. Cloth. Price, $6 net. Pp. 969, with illustrations. Philadelphia: Lea & Febiger, 1910.

ORGANIZATION OF THE PUBLIC SCHOOL HYGIENE SERVICE IN THE FEDERAL DISTRICT OF MEXICO. Paper presented to the American Public Health Association (37th Annual Meeting, Richmond, Va.). By Alfonso Pruneda, M.D. [Primera Alamo 16, City of Mexico.] Paper. Pp. 22, with illustrations. 1909.

DIE EXPERIMENTELLE PHARMAKOLOGIE ALS GRUNDLAGE DER ARZNEIBEHANDLUNG. Ein Lehrbuch für Studierende und Aerzte. Von Dr. Hans H. Meyer und Dr. R. Gottlieb, Professoren der Pharmakologie. Paper. Price, 12 marks. Pp. 483, with 62 illustrations. Berlin: Urban & Schwarzenberg, 1910.

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New Patents

Recent patents of interest to physicians:

943728. Ophthalmoscope. F. Baum, Paris, France.
943918. Electrical medical appliance. B. R. Davenport, Philadelphia.
943827. Post-mortem table. T. B. Hennessy, Chicago.
943676. Thermometer case and instruments. M. P. Hermann, Philadelphia.
944136. Vaginal syringe. W. Herschlay, Chicago.
943679. Embalming table. G. F. Honold, Sheboygan, Wis.
943685. Truss. A. A. Klug, Merrill, Wis.
944203. Screw-cap for collapsible tubes. F. McIntyre, New York.
944204. Bed and bedstead for the use of invalids. J. McKay, Bendigo, Victoria, Australia.
943703. Ankle support. W. J. McLinden, Owen Sound, Ontario, Canada.
943843. Truss-pad. I. M. Pease, Cincinnati.
943894. Device for treating cutaneous diseases. F. Rightmire, Paterson, N. J.
944001. Chemical closet. W. O. Sheafor, Winnipeg, Manitoba, Canada.
944473. Apparatus for making oxygen. G. von Ach, Newark, N. J.
944252. Massage apparatus. E. M. Bassler, Chicago.
944765. Stoppering for bottles intended to contain volatile liquids. J. Bengue, Paris, France.
944717. Agitating device for mixing carbonic-acid gas and water. L. Caul, Cleveland, Ohio.
944420. Antifouling composition. C. Ellis, Larchmont, N. Y.
944737. Vacuum massage machine. N. Lombard, Akron, Ohio.
944738. Medicament for diseases of the mucous membrane. W. Loose, Bremen, Germany.
944624. Invalid's mattress. J. T. Lunn, Southhampton, England.
944455. Injector. J., J. C. and R. D. Metcalfe, Fallowfield, England.
944830. Gastroscope. M. Sussmann, Berlin, Germany.
945359. Body brace. Joel U. Adams, Cincinnati, Ohio.
945118. Hypodermic syringe case. Sheldon S. S. Campbell, Collinsville, Conn.
945380. Atomizer. Frank C. Dorment, Detroit, Michigan.
945449. Invalid bed. Robert L. Edgecombe, Waterville, Quebec, Canada.
945530. Infant-weighing device. Kate B. Hayden, Columbus, Ohio.
945389. Sphygmomanometer. Max Herz, Vienna, Austria-Hungary.
945332. Obtaining ammonia from gas. Heinrich Koppers, Essen-on-the-Ruhr, Germany.
945282. Invalid bed or cot. George McElveen, Detroit.
945404. Machine for pasteurizing liquids. Wm. J. McKee, Detroit.
945139. Shoulder brace. Agnes Roland, Dorchester, Mass.
945292. Surgical forceps. Alvin F. Sether, Glendale, Ore.
945638. Glandular compound and producing the same. Jokichi Takamine, New York.
945657. Disinfecting apparatus. Louis Wieden, New York.
945255. Apparatus for distributing disinfectants. John W. Wilkie and R. Wilson, Birkenhead, England.
945307. Tank for administering oxygen. George von Ach, Newark, N. J.
946427. Manufacturing ammonia. Frederick W. Frerichs, St. Louis.
946256. Syringe. Thomas R. McMerthney, Tacoma, Wash.
945858. Shoulder brace. Eda Nesbitt, Swan Hill, Victoria, Australia.
946264. Dynamometer. Samuel T. Park and J. E. Phillips, Danville, Ill.
946397. Pasteurizing apparatus. Anders A. Pindstofte, Frederiksberg, near Copenhagen, Denmark.
945867. Automatic spray valve. Harry J. Richter, Chicago.
946467. Druggist's cabinet. Maurice P. Schwartz, Indianapolis.
945872. Vibrator. Alfred J. Stecker, Detroit.
40429. Design, Alta sick-call outfit. Joseph T. Homan, Cincinnati.